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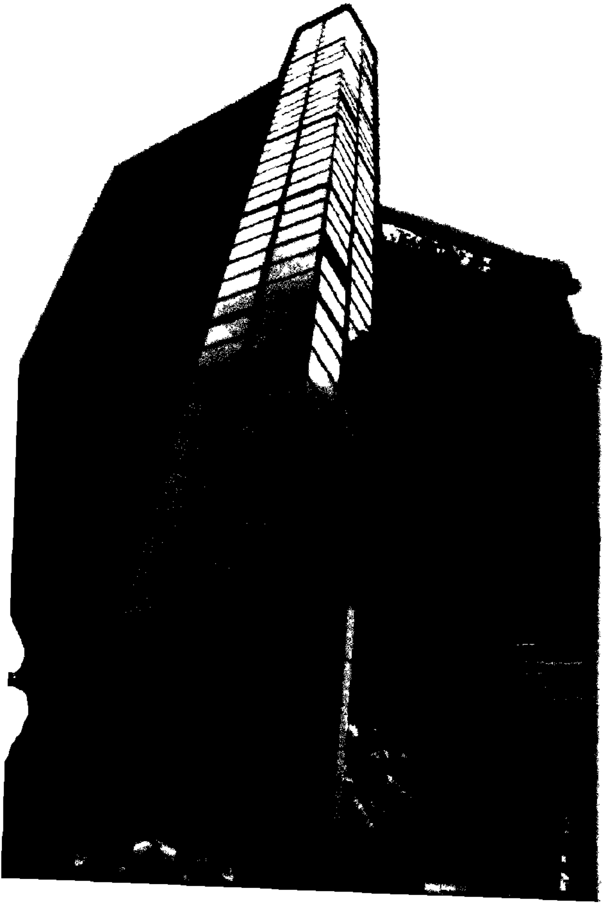
UNIVERSITY NEWS

A Weekly Journal of Higher Education

Association of
Indian Universities

Vol. 42 No. 05
February 02-08, 2004
Rs. 12.00



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INDIAN STATISTICAL INSTITUTE

203 B.T. Road, Kolkata-700 108

Admission Notice 1

Session : 2004-2005

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2. **3-year B.Math. (Hons.):** Successful completion of 10+2 years of Higher Secondary Education or equivalent with Mathematics and English Stipend Rs. 800/- per month.
3. **2-year M.Stat:** 3-year Bachelor's degree with Statistics as full subject or have a B.Stat/B.Math. degree from the Indian Statistical Institute or have a Statistician's Diploma/Senior Diploma in Statistics from the Indian Statistical Institute. Stipend Rs. 1200/- per month.
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   (b) Mathematics : (i) A good academic record with M.Stat, M.A./M.Sc. or equivalent degree in Mathematics or, (ii) outstanding mathematical maturity with B.Stat./B.Math., B.A./B.Sc. or equivalent degree with Mathematics as the main subject.
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   (e) Demography: Master's degree in Statistics/ Demography/ Population Sciences/ Population Studies/ Applied Mathematics/ Economics. Knowledge of Mathematics at graduate level is essential.
   (f) Physics and Applied Mathematics: M.Sc. in Physics/Mathematics/Statistics.
   (g) Geology: M.Sc. in Geology/ Applied Geology/ Earth Science or equivalent degree.
   (h) Sociology: M.A./M.Sc. in Sociology/Anthropology/Economics/History or any other Social Science subject, with minimum 55% marks.
   (i) Agriculture: M.Sc. (1st Class) in Botany/Life Science/Ecology & Environment/ Agricultural Botany.
   (j) Anthropology & Human Genetics: M.Sc. in Anthropology/Human Genetics/Human Biology.
   (k) Library and Information Science: Associateship in Documentation and Information Science of ISI or INSDOC or Master's degree in Library and Information Science.
   Fellowship for (a) to (k): Rs. 8000/- per month.
   A Special Fellowship of Rs. 12000/- p.m. is also available for outstanding candidates in each of the subjects: (i) Statistics, (ii) Mathematics, (iii) Computer Science and (iv) Economics.
9. **2-year Associateship in Documentation and Information Science:** (i) Bachelor's degree in Library Science, or (ii) Master's degree in any subject with at least two years' library/documentation/information handling experience or (iii) a four year plus degree, such as B.E. and M.B.B.S. with at least two years' library/documentation/information handling experience. Stipend Rs.1500/- per month.

The complete details are available in the prospectus. **2, 8(k) and 9 are offered only in Bangalore. 3 is offered only in Delhi. 8(a), 8(b) and 8(d) are offered in Kolkata**, Delhi and Bangalore. Remaining programmes are offered only in Kolkata. Selection of candidates is based on academic record, written tests and interviews conducted by the Institute. Candidates who have been offered Junior Research Fellowships by the CSIR/ NBHM may directly seek an interview at any time of the year only for fellowships listed in **8.** However, for Ph.D. registration in ISI, appropriate rules will be applicable. **Due consideration will be given to disabled candidates.**

Limited hostel facilities are available. Candidates who are due to complete the qualifying examinations before 01 July 2004 may also apply. Prospectus and application form can be obtained from the following offices of Indian Statistical Institute by post or in person, (a) Dean of Studies, Indian Statistical Institute, 203, Barrackpore Trunk Road, Kolkata 700 108, (b) Head, Indian Statistical Institute, Delhi Centre, 7, S.J.S. Sansanwal Marg, Near Qutab Hotel, Opposite Katwaria Sarai, New Delhi 110 016, (c) Head, Indian Statistical Institute, Bangalore Centre, 8th Mile, Mysore Road, R. V. College Post, Bangalore 560 059, (d) Head, SQC Unit, Indian Statistical Institute, Chateau D' Ampa (1st floor), 110 Nelson Manickam Road, Aminjikarai, Chennai 600 029, (e) Head, SQC Unit, Indian Statistical Institute, Street No. 8, Habshiguda, Hyderabad 500 007 from 17 February 2004 by paying an amount of **Rs. 350/-** in cash (between 11.00 a.m. and 2.00 p.m. on working days from Monday to Friday) or by **bank draft in favour of "Indian Statistical Institute"** payable at Kolkata (proper). Request for application forms should have mailing address in CAPITALS. **Postal orders, money orders and cheques will not be accepted.**

Prospectus and Application form are also available on our website **http://www.isical.ac.in/~deanweb** in PDF format. Candidates who want to send the downloaded application form should carefully read the instructions given in the website before filling in the application.

Last date for receiving requests for application forms	:	12 March, 2004
Last date for receiving completed application forms	:	02 April, 2004
Date of selection test (India and abroad)	:	*16 May, 2004*

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Vol. 42 February 02 - 08
No. 05 2004
Price Rs. 12.00

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Quality Imperatives in Higher Education

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Post-independent India had the misfortune of missing the industrial revolution because it occurred at a time when India was unfettering itself from the burden of a colonial tyranny. The end of the 20th Century has helped discover knowledge as an inexhaustible resource and driver of socio-economic prosperity. With the abundance of human resources, India is eminently equipped for grooming itself as a global leader in the knowledge society. The basic question that has to be answered is whether the higher educational system is equipped to respond to this opportunity in a need-based and qualitative manner.

The quality of knowledge generated within higher education institutions, is increasingly determining the nation's global competitiveness. This poses a major responsibility on the institutions of higher education in countries like India. Many of the government-run and aided institutions are chronically under-funded and face escalating demand from students clamouring for affordable access to higher education. The public funded Faculty most of whom have been desensitized through long years of Trade Union practice and protection and misguided ideology often lack motivation. Students are poorly taught and curricula remains unchanged and under-developed. Universities and colleges in the Developed countries, meanwhile, are constantly raising their levels of performance through quality management practices.

The 21st Century presents unique challenges for the higher education system. Higher education must be able to respond to rising student expectations and the demands of global competition. The impact of a global education market and the transition to the knowledge era poses great complexity to policy makers, regulators and administrators. This also presents an unparalleled opportunity to give a new direction to the role and mission of higher education by using TQM (Total quality Management) practices.

The access rate to higher education in India compares very poorly with the access rate in more developed countries where it ranges from 30% in Germany to 60% in the USA. If India has to be globally competitive in the knowledge era, it has to provide educational access to not less than 13 million youngsters before the end of the Xth Plan. This exploring demand has to be met without compromising on educational standards or quality.

The Government, Universities and various Regulatory bodies like UGC, AICTE, NCTE, etc. have to shed their conventional mindset and rise to the demands of the 21st century in chartering the course of higher education. They have to play the role of a facilitator of higher education, rather than as regulator. They should use their statutory powers to bring about a dynamic and flexible higher educational system which is geared to academic innovation and which helps to establish new benchmarks for quality.

The touchstone of today's education is quality assurance by the educational providers. With accreditation for quality becoming a national and international norm, until the entire academic system is geared towards quality, we in India are likely to be left behind. With the opening up of skill oriented education at competitive cost, students have become more discerning and expect comparative quality from the providers of education within the affordable reach of the student. Today quality in our collegiate system is immediately linked to the Grade awarded by the National Assessment and Accreditation Council, Bangalore. Although NAAC has drawn up an exhaustive model for ranking, there is a definite scope for improvement in the methodology of rating. The Association of Managements of Private Colleges, Tamilnadu (AMPC) had requested NAAC about 1 1/2 years back that instead of giving different weightages to the seven criteria out of a base of 100 points, it may be more appropriate, if each separate criteria of assessment is weighed against 100 points and the final performance arrived at through an average based on the total 700 points. Under the present system, the distribution of weightages among the seven criteria, all of which are important tends to bring in an element of arbitrariness in deciding the weightage and discounts the importance of some criteria at the cost of the other. The AMPC had also asked NAAC to come out with a "best practices academic model" based on their exhaustive experience so that aspiring Colleges can re-engineer their methods and practices for achieving superior academic excellence. It is earnestly hoped that NAAC will respond to these critical needs by coming out with appropriate solutions.

All the best educational institutions are recognised and chosen by the public and the student community based on the principles, philosophy and practices of quality and standards adopted by the institutions.

Under the circumstances, we need a new vision of higher education to be combined with better planning and higher standards of management. The commitment of all stakeholders must be summoned to provide strong and coordinated support and leadership in this critical area.

It is estimated that there will be a student population of 9.60 million to be provided access to higher education at the end of 2004-2005 which will go up to 12.9 million by the year 2007-8. Out of this, the formal education system is expected to cater to 83% with a non-formal distance education providing access to 17%. The challenge before educational administrators and policy makers is to expand qualitatively and not expand mindlessly. Access, affordability and quality become critical issues that must be addressed in a coordinated and balanced manner.

The scheme introduced by UGC for identifying and encouraging Colleges and Universities with a potential for excellence will go a long way in creating much needed awareness among educational providers to pursue higher standards and benchmark their quality to the best providers both within the country and abroad.

India is being increasingly recognised at the international level as a nation which contributes value added trained manpower delivering superior performance. Indian expertise has contributed to substantial wealth generation in the IT industry both at home and abroad. The universalisation of the job market and acceptance of Indian skills at the global level has increased opportunities for trained manpower. Thus the impact of globalisation has spurred demand for quality in education. Institutions of higher learning therefore have a major responsibility in imparting knowledge, developing skill and improving the intellectual capacities of its learners all of which must be supported by a stamp of quality for acceptance at international levels. The basic agenda facing higher educational providers in the 21st Century is to provide its learners with indepth knowledge of quality comparable to the best in the world. This can be achieved only if there is a strong commitment among all the stakeholders for a sustained effort towards quality assurance.

The concept of quality has a very interesting origin. The idea was first developed in the 1940s by an American, Mr.Deming, who tested it on industrial processes using statistical techniques. Although the concept was an American, it was post-war Japan that quickly learnt the lessons of quality control using the ideas of Edward Deming and his associates Joseph Juran and Crosby. The Japanese initiated the quality revolution by introducing it in manufacturing and then covering other sectors. The USA which enjoyed the advantages of a monopoly market ignored the compulsions of quality because American business could sell what they produced without difficulty. In the 1970s, with growing competition from Japanese products and loss of markets, the Americans started reflecting on the critical importance of quality. The turning point was in 1980, when NBC (National Broadcasting Centre) produced a national documentary titled "If Japan can, why can't we?". Total quality management soon became a fact of life in American industry and service segments which continues upto this day. We in India cannot afford to ignore quality for 30 long years like the Americans and not lose our access to global markets. This holds good particularly for the higher education system in India.

With the 21st century placing a premium on knowledge and the richness of human capital, it is an inevitable conclusion that the future will belong to those nations which are able to release the infinite potential locked up in their people. Only quality driven institutions of learning can serve as the ideal vehicle to pursue and realize such a grand opportunity for global leadership. The WTO regime on educational services presents an excellent opportunity to access global markets while throwing open our frontiers to external competition. With free market access, educational institutions will have to develop delivery models that provide advantages in terms of quality, cost, reliability and superior credentials.

Although the modern day concept of quality originated with Deming about 50 years back in 1950, the ancient wisdom of India contained in the Gita 4000 years back beautifully defines "True Quality"

- A Teacher's work is different from the work done by a machine. A machine works mechanically and efficiently turning finally into scrap. A teacher, on the other hand, by linking his work (Karma) with an inner vision (Spirit) transforms the performance of duty into Yoga. This ultimately leads to Karma Yoga. The performance of such Karma Yoga converts into dexterity, efficiency and excellence. Thereafter every action of duty enriches and strengthens the inner spirit preventing him from turning into scrap.
- The glorification of a Teacher into an Acharya takes place when the teacher converts "Work" into "Service".

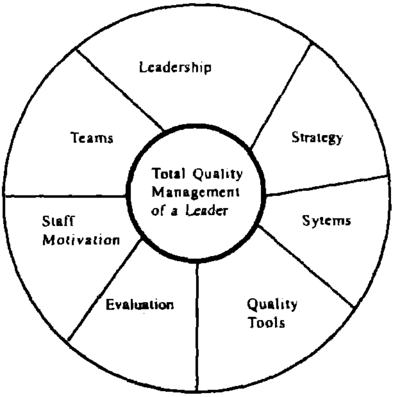
Every institution or service provider must have a clearly defined roadmap that provides for quality control, quality assurance and quality maintenance. This three stage process can be best achieved only if the key constituents in institutions of learning, demonstrate and deliver the attributes necessary for implementing a total quality management system. In line with quality enhancement objectives, all the key attributes required by the Management, administrative head - cum - Principal and the teaching faculty for a successful Quality Assurance mechanism in educational institutions is listed below:

Role of Management in Quality Assurance

- Provide a clear vision and mission of the Institution and lead the entire team for fulfillment of the goal.
- Inculcate respect and adherence for "core values" of the organisation among members of the team.
- Provide an environment which celebrates Teaching, Learning and Research.
- Institute programmes that satisfy the diverse learning needs of the students.
- Build up structures (organisational), systems (good working procedures) and processes (actual delivery) that promote and recognise quality.
- Invest time and resources necessary for fostering a culture of excellence.
- Ensure that "commitment to quality assurance" becomes a grass root level movement.
- Be open and responsive to feedback received through student opinion surveys, alumni feedback and routine programme assessment questionnaires (student as customer).
- Ensure that the quality management system is facilitating and enabling but not intrusive.
- Continuously raise the "performance bar" by adopting best academic practices of better governed institutions to delight the customer (student).
- Assure the primary stakeholders (the students) that the institution is in continuous pursuit of higher standards and that honest efforts are being undertaken to impart knowledge and skill.
- Undertake rigorous and periodic evaluation of the conduct of academic programmes while subjecting all teaching practices and processes to a objective academic audit.
- Analyse and diagnose the existing state of quality assurance and impart Training through seminars for a strategic approach to quality.
- Carrying out a regular review of all quality initiatives.

Role of Frincipal in Quality Assurance

- Wholeheartedly work to implement the Vision and Academic Mission of the College management in letter and spirit.
- Strive to perfect the multiple role of an ideal academic head, an efficient administrative head and as a evolving educational administrator.
- Ensure all activities are geared to the benefit of its primary customers namely the students.
- Demonstrate willingness to employ academic freedom for experimentation and innovation without being deterred by failures so that more perfect educational models can be evolved.
- Create a family bonding among all the stakeholders of the institution namely the students, parents, teachers and supporting staff.
- Have a vision and clear commitment to the quality improvement process while communicating the quality message to the rank and file.
- Ensure that there are adequate channels of communication through which the aspirations or expectations of the customers (students) can be communicated for attention or redressal.
- Institute necessary organisational structures with clearly defined responsibilities providing for delegation with accountability for performance.
- Work to eliminate or remove artificial barriers within the institution that may arise out of unhealthy behaviour, psychological or cultural differences.
- Focus on harnessing human potential by building effective teams.
- Develop appropriate mechanisms for monitoring and evaluating success.
- Harness the full potential of the academics by fostering team spirit and identification with institutional goals so that academic activity is productive, and all performance promotes quality.
- Be open to ideas, suggestions even criticism insofar as its acceptance is in the best interests of the Institution.
- Exercise leadership by being constructive, not critical, admit responsibility as a mature team leader instead of distributing fault, strive for continuous improvement with an eye on quality.
- Demonstrate qualities of mind, body and spirit that inspire, motivate and encourage all academics to follow suit. Leading by example is the best form of administrative and academic leadership - walk and talk method.
- Be open, transparent, accountable and fair in making judgments and in decision making.
- Cultivate a climate that encourages and recognizes true performers, while sensitizing non performers into better performance.
- Plan and implement programmes for professional and self development of the Faculty.
- Network with other peer institutions so as to adopt 'best academic and governance' practices.
- Personal and professional integrity is the most important trait of good leadership. It must be strengthened with conviction and passion to adhere to values and systems while conducting oneself in an accountable manner.
- A leader has to be a continuous learner - to be abreast of developments in his field so that he is well equipped to effectively lead his team to success.



Role of Teachers in Quality Assurance

In the current competitive global setting, Teachers must symbolise intellectual leadership and be a "role model" fully equipped to ignite the "thirst for knowledge" which is the purpose of all education.

- Convert the teaching learning process into an active intellectual engagement that results in visible transmission of knowledge with skill.
- *Maintain a high level of professional efficiency by* upgrading domain knowledge and adopt the right attitude to disseminate this knowledge to the learners.
- Use new educational technology and learning aids to prepare new educational material which broadens the horizons of learning and enriches the learning experience of the student.
- Collaborate closely with the student to map his abilities and shortcomings with a view to unlock the former and remedy the latter.
- Make continuous quality improvement the centre stage of all academic activity and cater to the varying aptitudes of learners with tailor made approaches.
- Adopt diversity in teaching methods with liberal use of case studies and realtime projects.
- Honestly evaluate the student review and feedback for appropriate intervention and quality enhancement.
- Be responsive to the demands of a changing curricula while making theoretical knowledge application oriented for equipping the learner to face employment needs.
- Integrate classroom teaching and education with work experience.
- Periodically benchmark and adopt best academic practices through interaction among peers in other institutions of higher education.
- Play the role of designers of the curriculum and innovators of new learning methods that contribute to the satisfying learning experiences for the student.
- Work to improve their professional competence while remaining connected with new developments in their field of specialization.
- Work for student evaluation reform by developing new methods for screening the level of knowledge absorption by the learner.
- Pursue mainstream research that can provide solutions while improving the quality of life - not stop with disseminating knowledge but also working to create new knowledge.
- Perform the social responsibilities of a teacher by inspiring and motivating learners to become responsible and productive citizens of the country.

Obstacles to Quality Control

- Failure of Management to plan for the future.
- Lack of consistency in purpose.
- Short term thinking at the cost of long term effort.
- Improvement to be aimed at by degree not by decree.
- Excessive/misplaced regulation causes a backlash by forcing the would be innovators to return back to "chalk and talk" and "teaching-to-test" methods (example - League Table introduced in U.K).

Common Causes of Quality Failure in Education

- Poor curriculum design.
- Inadequate and poorly maintained buildings (insufficient resources).
- Poor working environment.
- Unsuitable systems and procedures.
- Insufficiently creative time tabling.
- Insufficient staff development.
- Failures in communication.
- Lack of knowledge and lack of motivation.

The Cost of Failure

- Loss of student enrolment.
- Damage to reputation.
- Loss of opportunities
- Beginning of the End of an Institution's Identity?!❑

Intuitive Abilities and Human Resource Effectiveness: A Study of Educational Managers

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Management of human resources has come to assume incredible significance over the past few years largely due to changing environment and managers' consciousness of the fact that human capital is the most valuable asset a company invests in. Today human resource function is moving away from the transactional paper pushing, hiring-and-firing kind to become a strategic partner in the business. Technology is permeating this function to go beyond its mundane routine to places from where it can really impact the functioning of the organization. It is human resource function only, which contributes significantly in a company's global expansion plans irrespective of the fact that the organisation is manufacturing or service. The wired world coupled with boundary less operations has posed the biggest challenge for the managers in the form of attaining effectiveness. As the managerial function can be performed by human beings only and not by machines, the technology can help but it cannot replace human beings. Thus the effectiveness of managers is largely dependent on their soft skills like intuition. This is truer in case of the educational managers where in the process of input-output including the processor all are human beings. Therefore, intuition still remains a significant tool for human resource effectiveness even in the age of fast changing technology. The present paper is an attempt to find out the intuitive abilities of educational managers by discussing the concepts of human resource effectiveness, intuition and analyzing the relationship between the two.

Conceptual Overview

Every manager has a personality of his own, which affects his effectiveness in the context of his interaction with the environment. Though in the organizational setting every manager strives to be as effectiveness as possible, yet the significance of effectiveness is much more for an educational manager. For many managers effectiveness is still a vague term and just confined to just signing maximum number of papers or remaining in the limelight always. But for an educational manager, effectiveness is much more due to his continuous and regular interaction with the human beings only. Effectiveness, which is making ones best contribution towards the organizational objectives and goals, is much difficult as the contribution of these personnel is measured by different segments of the society, thereby making it a challenging task for them.

Though the human resource function has in general a poor image and sometimes justified, yet in the main due to its lack of internal marketing and presentation. This phenomenon has led to showing signs of insecurity, desperately searching for identity and justification within their own organizations. As a service function, educational managers are well aware that it plays primarily a supporting role and therefore needs to deliver something that contributes to overall value. Now under the spotlight, the personnel profession is anxiously seeking ways to measure its effectiveness and demonstrate its contribution to bottom-line profitability. Hence to be effective and competitive, today's organizations, whether in the private or the public sector, need to be flexible, lean and skilful which is of more use for educational managers.

There have been rising pressures on the human resource practitioners for self-preservation and the need of to be seen effective. Too often the personnel departments are accused of being insular, bureaucratic, reactive, and process driven. In contrast, in the prevailing industrial and academic environment, the departments are expected to be business oriented, responsive, proactive and strategic, and flexible. Therefore, to be effective has come as a big challenge for the executives in the area, which can be won over only by building credibility. Credibility is critical for the success of personnel: people at all levels will judge the function by the performance of those who staff it and by the way that it is managed. It is not that only external clients can judge effectiveness rather internal customers rightly feel of judging the effectiveness in terms of standards and satisfaction level.

It goes beyond saying that the key purpose of personnel is to: enable management to enhance the individual and collective contributions of people to the short and long term success of the enterprise. The success herein calls for strategic changes and management thereof. The implementation of these changes may be a distant dream for want of committed and effective teams, which leads to building a culture of commitment and effectiveness. Hence the managers of the day are concerned with creating an environment which enables management to recruit, train and motivate the people they need for today's and tomorrow's needs. These all needs of personnel can be well understood by drawing a SWOT grid for personnel, which is given in the Fig.I.

The information in the Figure-I highlights the need for new skills, a change of emphasis or new ideas. The more an organization is able to anticipate the changes and prepare in advance, the better its response and effectiveness will be. Hence effectiveness in human resource management in general and in educational management in particular can be viewed in terms of performance requirement, which can be defined as what we have to do, need to do or want to do. Operational capability is how we are doing, how we find out how we are doing, and how we are going to improve. Effectiveness that way can be achieved when one as manager manages instead of administering, go for devolved accountability and stay close to the customers. In all these and related operations there are many attributes that contribute to the success and one such attribute can be named as intuition. Hardly there is any area of management wherein intuition cannot play a role but its role in human resource effectiveness and educational management goes beyond saying. All great achievers in human resources are concerned with three things, and they all pertain to resource allocation: people, money and ideas. When one pick up the right people, and allocate the right quantum of money to particular divisions, and if break down the smokestack bureaucratic roles to get the best practices get transferred immediately from one division to the next, then success is granted. It means effectiveness in human resources is all about innovating, initiating, creating and envisioning and it is here the intuition of an educational manager make or mars the level of effectiveness.

Thus the professional managers are aware of the need to define problems before they can be solved, and solutions before they can be effectively implemented. It means that to reach at the above, the availability of knowledge required. The understanding of the term intuition becomes of paramount significance due to a possible source of knowledge as every type of knowledge encompasses intuition in one form or the

Figure-I
SWOT Grid for Personnel

Strength	**Opportunities**
• Defined recruitment process • Industrial relations advice • Computerised personnel system • Availability • Equal opportunities monitoring • Good manual records	• Devolve day-to-day personnel operations • Reduce bureaucracy • Training and skill development • Investors in people • Become more strategic • Improve information • Use IT more effectively
Weaknesses	**Threats**
• Lack of payroll integration • Poor training records • Poor quality records • Too operational • No board representation • Poor analysis	• Line managers' own system • Inconsistent HR applications • Industrial tribunal • Cuts in personnel staff • Use of external consultants

Source: Jim Matthewman (1995), Human Resource Effectiveness, p.45.

other. Though George Santayana refers to intuition as to our awareness of the immediate data yet Hocking has spoken of self-knowledge as the best case of intuition. Intuition and intelligence should not be confused as same because intelligence is a scientific tool to deal with the matter whereas intuition can lead one to the very inwardness of life. According to Sodhi et al one view is that intuition is an immediate way of knowing, it is sudden flash of light or immediate sensation where as another type of intuition is of more generalized nature and usually thought to be mark of genius who have the knack or intuition which enables them to see the intuition in a way that is new and different types of hypothesis and theories are created. Thus at the most practical or somewhat mechanical level, intuition is often termed as a skill that one can develop, much as one can develop or improve musical or artistic skills by practice under the supervision of an expert.

In fact intuition is not only a skill rather it is a trait where nature and not the nurture plays the predominant role in the ability to exhibit the phenomenon. That way intuition is an inherent trait more available to certain types, or available under certain conditions, rather than a technique available, on all, to all who practise a certain form of mental training. In fine intuition involves a cognitive process and a possible source of knowledge like experience and reason is nor infallible.

In fact due to multi-contextual and multilevel phenomenon, it is very hard to define intuition in absolute terms. But we should not confuse the term with instinct, impulse, ingenuity, inspiration, and inclination, which cannot be termed as intuition. At any given movement one is conscious of only a small section of what one knows. Intuition allows one to draw on that vast store house of unconscious knowledge that includes not only everything that one has experienced or learned either consciously or subliminally, also the infinite reservoir of the collective or universal unconscious, in which individual separateness and ego boundaries are transcended. In fact when everything seems to be going out of control, intuitive abilities come alive in the reactions and decisions of those capable of crisis management. The ability to diagnose problems created by rapid, complexity and conflict may require an intuitive frame of mind. Hence to achieve the best results meaning there by that the term intuition does not denote something contrary to reason, but something outside the province of reason, and thus a primary contributor in human resource effectiveness.

The Study

The academic environment of the day has become more dynamic as never before in the context of information explosion and as a consequence of expansion of facilities at different levels and on account of its contextual relevance, more so when it has to respond to global competition. On one hand the academic institutions have to encourage academic citizenship with focus on human resource development, while on the other they have to cope with the challenges such as the urge for excellence, better performance, up-gradation of skills, accessibility with mass education, IT revolution, increasing accessibility, resource crunch, teachers' empowerment, activism appraisal, research and consultancy, autonomy and accountability, commercialization and student support services, bureaucratic interferences, undue interferences of uninformed managements in academic activities, and mounting expectations from all interest groups. This type of environment has created multifarious challenges for the institution heads and calls for multi-managerial skills to cope up with the challenges. As an administrator, a college principal has to interact with people of diverse backgrounds with different positions on one pretext or the other, and hence need to have intuitive abilities in order to attain effectiveness at different levels

The present investigation has been carried out to study the intuitive abilities amongst the educational managers in the state of Haryana. The data has been collected from one hundred college principals working as educational managers with the help of a scale designed by Weston H. Agor (1889) ALM Survey, El Paso.TX: ENP Enterprises (for details see appendix). The scale consists of twelve statements presenting intuitive abilities of an administrator. Each statement has two relevant alternatives 'a' and 'b'. The highest possible intuitive score is 12; and lowest is 0 for one unit. The author of this scale states that traditional analytical techniques "are not as useful as they once were for guiding major decisions....If you hope to be better prepared for tomorrow, then it only seems logical to pay some attention to the use and development of intuitive skills for decision making". The data so collected has been analyzed with the help of need based statistical techniques and presented henceforth.

Major Findings

Educational managers are well aware of the need to define problems and setting the objectives before reaching at the solutions through their effective implementation. Here in the entire process of goal setting the intuitive abilities of the administrators has a great role to play. In fact in a situation when everything seems to be going out of control, intuitive abilities come alive in the reactions and decisions of those capable of crisis management leading to human resource effectiveness. Thus as said earlier the ability to diagnose problems created by rapid, complexity and conflict may require an intuitive frame of mind to achieve the best results meaning there by that the term intuition does not denote something contrary to reason, but something outside the province of reason. Hence availability of intuitive abilities in the educational managers will help him in attaining the higher level of effectiveness as to what extent these abilities are available has been shown as per the Table -1.

As per the data analysed the intuitive abilities of the administrators have not been very high. On taking item-wise interpretation the managers face the particular problem in-group working. Many educational managers have registered their preference for working with realistic instead of imaginative people and wish their friends to be serious and hard working and not exciting and emotional. Majority of the managers follow their day with planning first thus thereby creating a blockade on the way of intuition. As intuition is largely based upon farsightedness of the manager, and advance planning and rules boundary for the same may not work properly. This entire phenomenon has led to concluding that educational managers have moderate amount of intuition making them rule bound and losing the freedom of action. U-test has been applied to check the authenticity further at 95 per cent confidence limit around the mean and found that results of five statements out of a total of twelve statements fall below the lower control limit (LCL) showing the intuitive skills on the lower side. Further the observed value of H-test is also much less as compared to table value witnessing the above results. The value of mean and standard deviation do indicate in the same direction.

Implications for Human Resource Effectiveness

The field of human resource management has been typified by enormous progress during the last decades. The advent and availability of electronic data processing to array and analyse the vast amounts of information and increasing inflow of econometrics and computers have increased the importance of human resource

Table -1
Intuitive Abilities of Educational Managers
(n=100)

		Response	Relevant Score		Total Score
Intuitive Parameters	a	b	A	B	A+B
1	64	36	64	00	64
2	82	18	00	18	18
3	79	21	79	00	79
4	100	00	00	00	00
5	76	24	76	00	76
6	09	91	09	00	09
7	88	12	00	12	12
8	52	48	00	48	48
9	88	12	00	12	12
10	52	48	00	48	48
11	85	15	85	00	85
12	42	58	00	58	58

Kruskal Walli's H-test at a-0.05; 95% Confidence limit under U-statistics
Observed Value =15.2 πυ +1 .44υ ., (UCL) = 97 Mean Value = 42.4
Table Value = 21 .02 πυ-1 .44υ ,, (LCL) = 47 Standard Deviation= 42.5

Note: The details of Intuitive Parameters 1-12 have been given in Appendix.

function as all the decisions irrespective of their nature are implemented through human beings only. The recognition of intuition as a component of effective human resource management has not been restricted to smaller companies. In larger corporations as well, many successful executives and professionals now openly admit that they have learned to trust their intuition and, moreover, this intuition has become more reliable and accurate through the very process of trusting. References to the role of intuition in decision-making are turning up ever more frequently in the most reputed business journals and emphasizing its importance at individual, national and even at global level.

For a manager in general and a human resource manager in particular, management of change in the form of information overload is the biggest challenge. Information explosion is driving a number of social engines faster than ever before. The rapidity of change, accelerated by a growing information overload, has left present day managers unable to assess carefully all the implications of progress both within and without their specific area of business. Keeping up with change is becoming more difficult all the time as people using more innovative techniques seek to adapt and improve their methods, materials and management styles. Here the intuitive framework of thoughts becomes necessary even to keep abreast of change in a world, which changes more, and faster, every day. Intuitive ability may be the only skill, which will keep the modern professionals up to date and on course.

Intuition can provide educational managers with certain constancy amid the rising instabilities of a changing environment; it can also help make sense when too much complexity begins to reduce the problem to nonsense. The complexities of our life and work are increasing at a rapid pace and intuition seems to be an excellent tool for cutting through needless complexities. Intuitive overview helps to identify simple underlying patterns, defusing the broad demands of too many complexities. Only by excising this ability on a regular basis can one move forward in a consistent manner.

Conflicts are bound to happen in environment of increasing change and complexities. Dealing with conflicts, which naturally arise as these pressures continue to mount, require more patience and good humour. The ability to tap into an intuitive frame of mind can allow busy managers to select criteria among the conflicts inherent in multiple and evolving responses to a dynamic and unstable situation. Hence, it the intuitive ability of an educational manager, which can help solving and managing conflicts by keeping the individuals together as a team. And the intuitive managers, like talented coaches, earn respect in the eyes of their colleagues and subordinates alike by the ability to build on past and prepare for the future on a movement-to-movement basis.

Conclusion

To conclude, the intuitive abilities of a manager directly help him by creating vision, choosing the right direction and taking the right decision ultimately leading to effectiveness. To develop the ability to maintain a wise outlook- one which is constant, consistent and communicated through clear criteria throughout an organization-one must go beyond the calculations of conscious, quantitative decision making. Intuitive insight as a management tool may benefit immensely. In addition to choosing among clearly defined alternatives - such as whom to hire, which vendor to use, what strategy to pursue - one should also heed to voice of intuition when one has to solve the problem that does not offer clear-cut choices. Even during a face-to-face meeting, an intuitive manager may observe a thousand different subtle cues. Thus intuition is more than a toy and it is a method for our mental and physical development for a new humane and responsive stewardship. Standing amidst of the individual and organisational needs, the managers of the day must harness the mental and physical energies of many to the goals of the institution. Hence, the organizations will need intuitive people who can interpret the feelings and hunches of its internal clients and let the organization work in a smooth fashion even in the age of so many complexities.

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Value Inculcation among Younger Generation: A Suggested Model

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Education of an individual starts from cradle and continues till death. It is potent force for social reconstruction. It is concerned not only with social progress, but also with moral, political, social and economic development. Gandhi Ji rightly said, "Education is the preparation for complete living, adjustment to environment, perfection of one's nature, character-building and harmonious development of personality". It has an implication that education has the responsibility not only to provide training in three R's (Reading, writing, and arithmetic), but also to develop the qualities of hand, heart and head. In simple words, the purpose of education is to draw out best of the child by stimulating the spiritual, intellectual and physical facilities of the child. Therefore, the role of education to achieve the objectives in life has become more crucial in the present-day problems of society where values and morals are said to be deteriorating.

A great concern about the deterioration of essential values has also been shown in the National Policy on Education (1986) which states, "The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustment in the curriculum in order to make education a forceful tool for cultivation of social and moral values.

Meaning of Values

'Value' is one of those basic terms which cannot be fully defined. It expresses the significance–great or small–which a man ascribes to matters related to particular activity or experience or to his life in general and thus provides him guidance for his behaviour. Values do not exist as objects in space and time, but are established by judgments–by judging things, qualities, event or actions from a personal point of view. Values are not merely subjective in the sense that exist only for those who uphold them, they are more than matters of opinion. They, therefore, contain both subjective and objective elements. Different thinkers perceive values in various perspectives according to their own thinking.

Some thinkers believe that values are concepts and like all concepts, these do not exist in experience but in the mind of an individual. These represent the quality of worth or merit which man places on various aspects of his experience. The majority of professional educators also believe that value comes from experience.

The Idealists believe that "the objective of living and learning is to develop the natural man into the ideal man." According to them, values substantially exist and man values them because they are realities and part of the fabric of cosmos.

Unlike the Idealists, the Pragmatics hold that values are not pre-existent, fixed or eternal. Pragmatic values are not absolute in themselves but are valuable in a relative way to the situation requiring a choice and to the future situation that might hypothetically exist as the result of immediate alternatives of action. Man creates values according to circumstance and environment. The naturalists and realists believe that values are found in nature and are discovered by man who is a rational being.

Rationalists consider the eternal and absolute nature of value in different prospects. According to them, if values are really universal, they should be so among all communities in the world, but this is not the case. So much so that some values of various communities even oppose each other. Likewise, if values have objectivity in themselves, they should be equally obvious to all as the tables and chairs are. But this is also not the case of objective nature of values. Though some people who believe in the objectivity of values take recourse to the degree of value consciousness in man like idealists. But such a recourse is unavailing. Apart from this, clarity of value-consciousness should yield unanimous result. But in the field of values, unanimity is nowhere to be found. All this shows that values are not objectively given. Man makes values. Man is the maker of all values.

In the broader view, anything good or bad is a value (Pepper) or a value is anything of interest to a human subject (Perry, 1958). Men are not indifferent to the world; they do not stop with a sheerly factual view of their experience. (Kohler, 1938). Explicitly or implicitly, they are continually regarding things as good or bad, a true or false, as virtues or vices. Thus, the phenomena of evaluation is valuing and is a continuous life-long process. (Raths *et al* 1966) writes, "Persons have experiences, which work as general guides to behaviour. These guides tend to give direction to life and may be called values."

Rokeach (1973) defines values as an enduring belief, a specific mode of conduct, or end state of existence. Gorden Allport (1969) has defined value as "a belief upon which a man acts by preferences." A value is what is desired or what is sought. Values may be operationally conceived as those guiding principles of life which are Conducive to one's physical and mental health as well as to social welfare and adjustment and which are in tune with one's culture.

Post Independence Initiatives

Initiatives for values inculcation among succeeding generations have been made from the very beginning of Indian Society in one or another way but the organised efforts made by the government after independence reflected in the reports of various Committees and Commissions. After independence almost all the Commissions and Committees have highlighted the need for value inculcation. Some of the important milestones in value education have been the recommendations of University Education Commission (1948-1949), Secondary Education Commission (1952-53), Sri Prakash Committee (1961), Kothari Commission (1964-66), National Commission on Teachers (1983), National Policy on Education (1986) and Programme of Action (1992). The Standing Committee of the Parliament has made some very bold and practical recommendations for Ministry of Human Resource Development under the Chairmanship of Shri S.B. Chavan. Its report was presented to the Parliament of India in February, 1999. Its recommendations on value education and religion have been included comprehensively in the National Curriculum Framework for School Education published in November, 2000. Actually, the need for value inculcation was felt from time to time but the target practically could not be achieved because at the implementation stage the policy formulations have not been transformed into pragmatic strategies.

Methods and Approaches for Value Inculcation

The teaching of certain procedural values, such as logical or critical things, is essential to pedagogical effectiveness. In order to make students able to evaluate rationally various conclusions and recommendations to which they are exposed during their life, there is a need to teach them the value of rational analysis and values of objectivity. In the present day, many methods are used for inculcating values among students. The description of these methods is given in the following paragraphs:

(a) ***Lecture Method:*** This is a traditional way of values inculcation. In this methods, great personalities, professionalists and teachers deliver the lecture or talk on various value-laden topics of social importance. The lecture may be in daily routine or at certain occasions. Through this approach, they try to inculcate various values simply in the form of information. In this way the students get the idea of what is good or bad in a particular situation or what values they should live by. The students get product rather than procedure. So, this is a passive approach of value imbibing among students.

(b) ***Gold-fish Bowl Method:*** As is obvious from its nomenclature, when a fish goes sick, it is taken out of the bowl and then treated one-by-one and put back. In the similar way, children are subjected to physical punishment or moral exhortation, whenever value problem arises. The children may also be referred to child guidance clinics or educational psychologists or sent to special school. The problem with this method is, that process of curing the value system goes on without making any change in environment where the child became sick (devalued).

(c) ***Providing Religious Education:*** This is another way of imbibing values through oral preaching or sermoning among children. The emphasis is given to impart religious ethos and morality. But this type of education has become out-dated with the emergence of pluralistic societies. The colleges and schools have students from different sections of society. Even though, there is no denying of the fact that teaching of religion helps in retaining values. Still the doubt exists that this makes the students fanatic, -short-sighted and less rational.

(d) ***Silent-sitting:*** This is an effective and powerful technique which leads to superior concentration, better receptivity, finer grasping power and improving memory. With the help of this technique, various values like truth, peace etc. can be developed among younger generation. But this method is limited in scope.

(e) ***Role-playing:*** Role-playing is also a technique for the inculcation of values among students. Through this technique, children play different roles in various situations and they gain insight into values and feelings. Role-playing requires students to taken on and act out the roles of real or imaginary individuals in various situations,. According to Shaftels, it involves nine steps. These are: (i) warm up (teacher introduction and reading of the story); (ii) selecting role player, (iii) preparing the audience to observe ; (iv) setting the stage; (v) the enactment; (vi) discussion and evaluation; (vii) further enactment; (viii) further discussion; and (ix) generalization.

To engage students in role-playing, the teacher or a student reads a story in which an individual is faced with a problem that is personally important and relevant to the concerns of the students in the classroom. Although an effective technique, it is limited in implementation.

(f) ***Providing Moral Ideology:*** In this method, ideologies are put before the students. These may be from religious fundamentalism or social or political philosophy. The approach indoctrinates rather than educates.

(g) ***Story Telling:*** This is an easy, interesting and effective way of imbibing values among children. With the help of a story the children experience various situations of life and they get insight. But the limitation of this approach is that students get experiences through imagination rather in real situation. Moreover, it is effective at primary level rather than at higher stages where students seek rationality before accepting any idea or value.

(h) ***Teacher Behaviour:*** This method is based upon the assumption that ideal teacher and ideal school are the most powerful instruments of creating values. They have great influence on the child and, indeed, constitute elements of value education. Here, value acquisition is regarded as by-product-of the totality of education with the result that it gets submerged in that totality. But this approach has two lacunae-one is that it is away from emotions and the second is, it is away from rationality.

(i) ***Books and Supplementary Reading:*** The books and reading materials essentially inspire and clarify the definition and nature of values. But the knowledge is more theoretical and is not likely to bring about desired behavioural change.

(j) ***Activities:*** Now-a-days, most emphasized aspect of teaching values are activities like simulation, cultural activities, productive manual work-oriented activities, health and cleanliness activities etc. It is presumed that these activities help in moulding the character and bringing about behavioural change.

(k) ***Providing Assembly Programmes:*** Programmes like morning prayers, meditation, talk on moral themes, quotations for today, narration of anecdotes from the biographies of great personalities etc. are the programme have religious outlook rather scientific one.

(l) ***Social Science Programmes:*** Prgrammes like NCC, NSS, *Shramadan* and other special service programmes viz., teaching of adults, helping the flood victims, services in the hospitals, etc. have immense importance in imbibing values among students. But these programme become the source of getting certificates for further benefits in the carrier rather than true service.

The major limitation of methods discussed in the preceding paragraphs is that all these appeal to emotions and not to reason. The rational outlook is essential as it makes the man open-minded, tentative and provisional in nature, dispassionate, cool and tolerant in opinion. The point is that rationality does not give us values, rather attempts to regulate our valuation. Our feeling give us the values but the reasoning helps us to achieve those values. So, such a method of teaching is required which is conducive to imbibe values among students. The aim of the method should be to teach procedure rather than to give solutions. In other words, method should be so employed that mental processes involved in valuation. Through the process, child identifies his or her own values. In this direction, value clarification approach seems to be quite useful. Here, the individuals are invited to initiate and explore their own valuing process and within the context of group situation, they are encouraged to use one another as resources.

Value Clarification Approach

Value clarification is a process that may be used in schools or colleges to help students learn to make choices from alternate options based on individual belief system and consideration of the consequences of choosing particular options. It is an approach that tells a person what value should be or what values should not be cited within a specific situation. Raths, Harmin and Simon first explicated this process in their book entitled 'Values and Teaching', in which they described seven sub-processes mat lead towards value clarity. These sub-processes are: (i) choosing from alternatives; (ii) thoughtfully considering the consequences of alternatives; (iii) choosing freely; (iv) prizing and cherishing, (v) publicly affirmimg; (vi) acting repeatedly; and (vii) acting with-a pattern or consistency. These seven processes were also described as "Criteria" for a value. But some misgivings have arisen about Rath's conception of seven processes of valuing, or the criteria for a value. One problem is with the concept of criteria. Although useful theoretically, the concept is not operational. How proud must someone be of a belief before it may be considered as a 'value'? How many alternatives must be considered before the "alternatives" criterion is satisfied? How often must action be repeated? And so on. No one can say except the individual; and the individual's concern is to use to valuing processes wherever and whenever appropriate, not be achieve some theoretical goal of an "official value". More important, the seven sub-processes seem insufficient to fully comprehend the valuing processes; that is, the means of which values are clarified and developed. A more recent formulation of the valuing processes (krischenbaum, 1973) is based on Rath's original seven processes and is consistent with them, but it goes further in expanding the concept of valuing. According to him, the use of the valuing process does not guarantee a good decision for individual or society, it merely increase the likelihood. This valuing process has five dimensions, each containing several sub-processes. These five dimensions are: (i) thinking, (ii) feeling, (iii) choosing, (iv) acting and (v) communicating. These five dimensions are not discrete psychological processes, an individual can be engaged in all of them or some of them at the same time. These strategies of teaching values appear to be more effective in value orientation of students than conventional method as their focus is on valuing process itself These approaches are analytical in nature and use behaviour modification technology.

Still, another method given by Oliver and Shaver is very useful for clarifying one's own values where an social problem or public issue is legally analyzed. This method is called as ' Jurisprudential Inquiry Model' (JIM). Jurisprudential inquiry model is a effective strategy for values inculcation because of its own advantages. One notable advantage of this method is that open climate for discussion is there which is a major feature of child centred approach in the classroom. Another advantage is that the teacher is very powerful person who initiates the questions or inquiry during the process. This is the reason that the method can be easily linked with the climate of College as the teacher plays a dominant role. Because of its simplicity and application in the Indian classroom settings, Jurisprudential Inquire Model of teaching seems to be quite useful.

Jurisprudential Inquiry Model of Teaching

The dictionary meaning of Jurisprudence is science or philosophy of law, or the knowledge or skill to deal with issues in legal fashion. Donal Oliver and James P Shaver, who created this method-meant Jury process of resolving complex controversial issues within the context of productive social order. In other words, it is a process of inquiry for solving controversial issues as is held by a Supreme Court judge. The judge first of all listens the case which is followed by evidences, then analyses the legal position taken by both the sides, weighs these positions and evidences, assesses the meaning and position of law and finally makes the best possible decision. When a similar role is played by the teacher along with the students in the classroom to analyse the social problem or public policy issues, then it becomes Jurisprudential way of teaching. This model helps the students in understanding the complexity of the problems so that they can be able to make their position reflect that complexity. The main purpose of this method is to help students learn how to formulate defensible stances on public policy issues. In this way, the main goal of the model for students is to develop public policy stances and dialogue skill by using three types of competence that is (i) an understanding of the value's framework of Indian creed; (ii) mastery of the intellectual skills of legal reasoning; and (iii) knowledge of contemporary public issues.

This method involves conception of values and productive dialogue as well as curriculum and pedagogical consideration. During the process of dialogue, students takes a position and the teacher challenges the position with questions. The teahcer's questions are designed to push students' thinking about their stance and to help them learn. The teacher orients the class to the case and students usually become emotionally involved in the analysis, making the discussion intense and personal. With more practice, it is hoped that their positions will become more complex and well formulated. The model, however, has to be looked into from the point of view of its assumptions and characteristics.

(a) ***Assumptions:*** The basic assumptions underlying the Jurisprudential Inquiry Model are:

(i) In society, people differ in their views and priorities in which social values legitimately conflict with one another.

(ii) Controversial issues are not simple and there is no one right solution for them.

(iii) The differences in values can be negotiated through free and open debate by making it the process of rational consent.

(b) ***Characteristics:*** The specific features of Jurisprudential Inquiry Model are:

(i) Socratic Dialogue: The heart of this model is Socratic style of dialogue. The teacher persuades the students to take a position on an issue. Then the teacher challenges the taken position with questions. These questions are designed to push student's thinking about the stand taken by him.

(ii) ***Public Policy Issue:*** After the case presentation, the students identify one or more public policy issues. A Public policy issue is a question involving choice or a decision for action by students. These policy issues can be phrased either as general question or as choices for personal action. These question(s) begin from the word "Should" that is why called "Should Questions". On the basis of these questions, conflicting values have to be identified.

(iii) ***Conflicting Values:*** The situation is taken up in terms of conflicting social values. The stand on these values taken through the process of dialogue. This dialogue implies commitment to reason, reflection and the right of all parties to express themselves before being bound by a decision.

(iv) ***Use of Analogies:*** During the dialogue, the teacher uses analogies as means of contradicting student's general statement. Further, these help in testing the logic as well as limits of student's statement.

(v) ***Legal Reasoning Process:*** The teaching process involves free and open discussion on controversial issues. The discussion is always based on legal reasons pertaining to a particular value (social , ethical or political) involved in the process.

(vi) ***A Framework of Value:*** In order to analyse the public policy issue, the students have to identify the legal ethical issue underlying the public policy issue. Legal ethical issues are the legal tool that is called as framework of value. These help the students and teachers in abstracting the general values from the concrete situation and identifying the conflicting values.

(vii) ***Balancing Values:*** Oliver and Shaver feel that the best stance on an issue is to maintain a balance of values in which each value is minimally compromised. To achieve such a balance, each party in a controversy tries to understand the reason and assumptions behind the other's position.

(viii) ***Particular Pattern of Argumentation:*** During the process of defending or attacking a policy stance, four patterns of argumentation are involved. One is establishing the point at which the value is violated; second is concerned with clarification of value conflict through analogies. Third is connected with proving desirable or undesirable consequences of a position, while fourth type of argument is linked with assertion of priority of one value over another.

On the basis of preceding discussion, in a nutshell, it may be said that jurisprudential Inquiring model of teaching is an effective approach for value inculcation among younger generation as compare to the traditional method of values teaching.

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The Second Green Revolution and beyond

APJ Abdul Kalam, the President of India delivered the Convocation Address at the twenty-first convocation of the GB Pant University of Agriculture and Technology, Pantnagar, on Monday, November 17, 2003. He said " In India, a large number of people earn their livelihood from agriculture and farming. Agricultural universities have to engage themselves in research to reinforce the efforts of farmers for enabling the enhancement of per hectare productivity and graduating to food processing near large farms and also marketing their products. Simultaneously, they should network with multiple universities to enhance cost-effective, long life storage methods and evolve a scheme for stabilised cost structure, so that high volume production does not bring farmers to despair. Also, they should facilitate farmers to produce grains, vegetables and fruits meeting international standards. As you all know today any farm product that is exported, requires a certification in terms of its nutrient value and that it is free of chemicals. This aspect has to be focused right from the development of the seed to the final product, which is acceptable in the international market." Excerpts.

Being the only agricultural university in the State of Uttaranchal, this university has a greater responsibility towards the development of the State apart from participating in national missions. Any university is judged by the level and extent of the research work it accomplishes. This sets in a regenerative cycle of excellence. Experience of research leads to quality teaching and quality teaching imparted to the young in turn enriches research. Research brings transformation and development and also enhances the quality of education. Both research and teaching have to be carried out in the best tradition of the Govind Ballabh Pant University. You have a potential in terms of technology as well as human resource. This can be used to execute several research and development projects, which will transform the lives of the people, especially those living in the remote and hilly parts of the region leading to the overall development of the State. Today I would like to discuss with you a few such research and developmental tasks towards ushering in a new era in agriculture.

The Green Revolution

As you are aware, the First Green Revolution launched by the great visionaries Shri C. Subramaniam and Dr MS Swaminathan with the help of agricultural scientists, farmers and entrepreneurs, liberated India from the situation of what was called "ship to mouth existence". Through an effort of historical magnitude, India attained self-sufficiency in food and we can now export certain quantities of food-grains. The contribution of this University in the Green Revolution by providing high quality "Pantnagar Seeds" to farmers is well known. As part of this First Green Revolution, the country has been able to produce over 200 million tonnes of food- grains per year. But there are challenges ahead.

India has now toembark upon the Second Green Revolution, which will enable it to further increase its productivity in the agricultural sector. By 2020 India would require to produce over 380 million tonnes in view of the growth in population. The increase in production would have to surmount many impeding factors. The requirement of land for the increasing population as well as for greater afforestation and environmental preservation activities would force a situation whereby the present 170 million hectares of arable land would not be fully available. It might shrink to 100 million hectares by 2020. In addition, there will be a shortage of water. Our agricultural scientists and technologists have to work for doubling the productivity of the available land with lesser area being available for cultivation with less water. The type of technologies needed would be in the areas of development of seeds that would ensure good yield even under constraints of water and land. The Second Green Revolution is indeed a knowledge graduation from the characterisation of soil to the matching of the seed with the composition of the fertilizer, water management and evolving pre-harvesting techniques for such conditions. The domain of a farmer's work would enlarge from grain production to food processing and marketing. While doing so, utmost care would have to be taken for various environmental and people related aspects leading to sustainable development. I would like to mention some of the areas in which we need to focus on to realise the Second Green Revolution.

Changes in Employment: Agricultural Produce to Marketing

In 1980, the agriculture sector employed, in parts or in full, 76 percent of the people of India. It reduced to 65 percent in 1994 and is expected to be 60 percent by 2012. It may further fall to 50 percent by the year 2020. This will happen for two reasons. Agriculture technology would assist future farmers in engaging lesser number of workers and the simultaneous growth in the service sector would be preffered by more people for employment. We must therefore assume in this period, that lesser number of people would be available for farming. Many will be migrating to food processing and marketing. Hence, it is important for the Govind Ballabh Pant University faculty to work in generating graduates who can spread and work for high productivity of wheat and paddy from what it is today and empower farmers with the capability to take up food processing and food marketing. It is indeed a big mission. I would suggest the Govind Ballabh Pant University to set a trend in expanding the conventional role of the Indian farmer from a producer of food to an entrepreneur engaged in processing and marketing of international standard farm products.

Soil Upgradation

Over a period of time through continuous usage of fertilizers, pesticides and insecticides, there has been deterioration in the quality of soil, particularly a reduction of carbon content and increase in salinity. Rejuvenation of soil characteristics is an important area for specialists to tackle, with specific emphasis on recovery of its nutritional value. More thrust needs to be given on adopting methods such as multi-cropping, rotation of crops and organic farming. A farmer in the district of Haldwani in Uttaranchal, has already exemplified adoption of unique organic farming techniques for increased and sustainable productivity. The University can play a major role in making the State a leader in organic farming.

Dry Land Agriculture

Integrated nutrient management continues to be a focal issue in dry lands as fertilizer use is not likely to pick up significantly unless water supply is assured. One of the reasons ascribed to low response of bio-fertilizers in dry lands is the low status of soil organic matter. Soil fertility in dry lands can be sustained only through maintenance of organic matter and achieving better fertilizer-use efficiency through integration of moisture-conservation practices along with soil-fertility management. Strategies foron-farm generation of organic matter need to be evolved.

Quality of Seeds

Govind Ballabh Pant University has indeed the core competence in the science and technology of seed production. Thus, you are fully equipped to further improve the quality of seeds for enabling farming in areas where the soil is saline and the environmental temperature gradient is high. This should be achieved through production of salinity tolerant and temperature tolerant seeds. In addition, seeds also have to be resistant to the stress induced by the residual effect of pesticides and insecticides. Universities and research organisations have to lay more emphasis on developing seeds, which require less water, so that farmers are able to increase productivity even in critical environmental conditions.

Water Management

Geography is very closely linked to the quality of life in our vast country. Wherever there are people enduring economic hardships there is also a problem of availability of water. It costs energy and money to bring water for specialised agriculture in dry areas. We need to develop proper agricultural technologies and water conservation methodologies that can help enhance agriculture productivity and lift people above the poverty line. Solutions may be just beyond agriculture alone spanning animal husbandry, poultry, agro-processing and other related activities.

Our agriculture is still dependent on the timely arrival and intensity of the monsoon. It is high time that we have an overall water management plan for conservation of water, preparation of watershed schemes, rainwater harvesting and recharging of ground water. These measures will help prevent loss of crops by using harvested water for nursery development and delaying transplantation in case of late arrival of the monsoon. The University, with its vast human resource potential, can popularise water management techniques in distant parts of the State and elsewhere in the country in collaboration with the Ministry of Water Resources.

Agro-processing and Waste Management

Changing life-styles of the modern generation are giving rise to a demand for processed food. For example, a special type of corn is required for making cornflakes and a unique potato crop for making wafers. The agro-processing industry has to take into account the retention of the nutritional value and safeguarding against possible side effects of additives and preservatives. In addition, the agriculture and agro-processing industry in India has to master many new standards and perceptions for cleanliness, generally described as phyto-sanitary requirements. The University can extend its support to the agro-processing sector through research and application of innovative technologies.

Management of agricultural waste is another important area, which can turn out to be a source for revenue generation. Farmers can realise better value from agricultural residue by paying special attention to its use in organic farming and making value added products before disposal. Agricultural waste should be put to use by developing appropriate and cost-effective technologies such as generation of biogas, production of vermi-compost and paper.

Role of Information Technology

Information Technology should be used for maintaining an updated and enriched database of region specific agricultural information and timely dissemination to farmers of information pertaining to soil enrichment, seed selection, actions relating to arrival of the monsoon etc. In addition, information regarding agricultural product preferences - both national and international, demand-supply status in respect of different products and current prices should be made available on-line to farmers, so that they can take timely decisions on crop product diversification strategies and positioning them in the right market to get optimum revenue. The University can extend its support to district and panchayat level institutions to take a lead in central acquisition of the latest information using Information Technology as a tool and making it available to farmers in their native language. Information Technology should be used by networking agricultural universities to generate a data bank for at least 20 years. The data bank should provide information on seed management, water management, treatment of typical diseases, and above all annual output, distribution and market dynamics.

Tele-consultancy

The Govind Ballabh Pant University should be connected to other universities of excellence in the country and also farming centres through tele-education. Students of these universities should have a collaborative tele-education network for interacting with renowned scholars in various specialisations. Tele-education will provide knowledge connectivity and will facilitate the creation of a knowledge society, leading to enhanced wealth generation for national development. In order to bring about a vibrant educational and research atmosphere, we need to initiate research programmes in collaboration with various scientific and research institutions in the country in the core competence area of each university. This networking will provide larger exposure to students and the faculty of the university and enable enhanced employment and research opportunities.

The University in coordination with local institutions can consider extending tele-consultancy services in agriculture and related fields to farmers, thereby ensuring timely dissemination of appropriate information. I understand that you are engaged in research work for medicinal and aromatic plants. The people of the region can get the benefits of the successful results of such projects through the tele-consultancy facility in the area of herbal plants. The university can suggest to the farmers to go in for suitable plantation in between the main crops. This will enrich the soil while the farmers will get incremental income.

PURA Model

As you are aware, our Prime Minister in his Independence Day announcements has declared a rural development programme called PURA - Providing Urban amenities in Rural Areas. It involves:

Identification of rural clusters with growth potential and creating four types of connectivities for them:

(i) Physical connectivity in the form of road, transportation, and power connectivity;

(ii) electronic connectivity in the form of reliable telecom, Internet and Information Technology services;

(iii) knowledge connectivity in the form of good educational and training institutions; and

(iv) market connectivity that would enable farmers and others to get the best prices for their produce.

The majority of our population lives in villages. The development of the nation requires the enhancement of economic connectivity of villages. The Govind Ballabh Pant University can take this as a theatre of action. Out of six lakh villages in the country about 50,000 PURA complexes would emerge. What is the type of farming to be chosen, the area under cultivation, water management, production, food processing and marketing is a task of paramount effort. Govind Ballabh Pant University can consider the PURA model to be implemented in the State of Uttaranchal to begin with keeping the following variables in mind:

(a) Number of villages per complex;
(b) number of village-complexes for the State;
(c) crop pattern for different complexes based on soil, weather, core competence, water availability and region (hill or plain);
(d) cultivation methods;
(e) food processing units; and
(f) marketing centres.

The model should enable proper selection of clusters and deployment of farmers in different areas of agriculture, agro-processing and the market to make this programme a reality.

Concluding Remarks

In India, a large number of people earn their livelihood from agriculture and farming. Agricultural universities have to engage themselves in research to reinforce the efforts of farmers for enabling the enhancement of per hectare productivity and graduating to food processing near large farms and also marketing their products Simultaneously, they should network with multiple universities to enhance cost-effective, long life storage methods and evolve a scheme for stabilised cost structure, so that high volume production does not bring farmers to despair. Also, they should facilitate farmers to produce grains, vegetables and fruits meeting international standards. As you all know today any farm product that is exported, requires a certification in terms of its nutrient value and that it is free of chemicals. This aspect has to be focused right from the development of the seed to the final product, which is acceptable in the international market.

Govind Ballabh Pant University has been a pioneering institution. Leadership is in its soil. I would like to greet the Govind Ballabh Pant University of Agriculture and Technology for its contribution to various agricultural missions and now I am sure that the graduating students will be pioneers in producing prosperous and happy farmers.

May God bless you !

A Ten Point Oath for the Youth

1. *I will love whichever profession I take up and I will try to excel in it thereby contributing to National development.*
2. *From now onwards, I will teach at least ten illiterate persons to read and write.*
3. *I will plant ten saplings or trees and, ensure their growth.*
4. *I will go to rural and urban areas to reform at least five persons from the habits of drug addiction and gambling.*
5. *I will take responsibility for removing the pain of ailing people.*
6. *I will participate in the mission of realizing the economic strength of India by combining it with an education with value system and by transforming religion into a spiritual force.*
7. *I will not support any differentiation on account of community or language.*
8. *I will lead an honest life, free from all corruption and will set an example for others to adopt a transparent way of life.*
9. *I will always be a friend of the mentally and physically challenged persons and I will work hard to make them feel normal.*
10. *I will celebrate the success of my country and my people.* ❑

INVITATION TO AUTHORS

Authors are invited to contribute articles on contemporary issues in higher education in general and Indian higher education in particular for publication in the 'University News'. The articles may be sent as an e-mail attachment in MS WORD to : *aiu@del2.vsnl.net.in* or printed / typed copy in duplicate along with floppy by post at the following address :

The Editor
University News
Association of Indian Universities
AIU House
16 Comrade Indrajit Gupta Marg
(Kotla Marg), New Delhi 110 002

CAMPUS NEWS

National Seminar on Technical Manpower Development

The National Technical Manpower Information System (NTMIS), Institute of applied Manpower Research, Delhi in association with National Institute of Technology, Rourkela, Orissa is organizing a 'National Seminar on Technical Manpower Development and Utilization' during April 15 – 16, 2004 at National Institute of Technology, Rourkela, Orissa. The National Technical Manpower Information System was set up by the Ministry of Education and Culture, Government of India towards the end of 1983, with a view to generate and maintain reliable database and relevant information needed for planning and administration of technical education. The NTMIS which was earlier with the Ministry has been transferred to the All India Council for Technical Education (AICTE). The NTMIS comprises a Lead Centre at the Institute of Applied Manpower Research (IAMR), Delhi and 21 Nodal Centres spread all over the country of which four are located in the four Regional Boards of Apprenticeship Training.

Technical manpower is mainly generated by various technical institutions, professional bodies, university departments and industries. These technical manpower is absorbed in the State and Central Government organizations, Private and Public Sector enterprises, some local bodies of the country. A good number of technical manpower seek better opportunities abroad. Earlier, NTMIS activities were confined to postgraduates, graduates and diploma holders in Engineering. Now the disciplines like Management, Pharmacy and Hotel Management and Catering Technology have also been included under the scheme of NTMIS.

The Seminar aims at providing an atmosphere to encourage the exchange of ideas between peers, and providing opportunities for researchers, managers and planners to learn from each other. The Seminar will focus on all aspects of technical manpower including the following sub-themes.

- Current Development in Technical Education.
- Employment Scenario of Technical Graduates.
- Technical Manpower Forecasting.
- Private Participation in Technical Education.
- Foreign Participation in Technical Education.
- Quality of Technical Education.
- Future Perspectives in Technical Education.

Representatives from industries, technical educational institutions, directorates of technical education, directorates of industries, directorates of employment, NTMIS and others engaged in training, placement and recruitment of technical manpower may attend the Seminar. Registration fee is Rs. 500/- per participant. On the recommendation of the screening committee, the fee may be waived to the authors of a few selected papers and sleeper class train fare may be reimbursed if they are not sponsored by their organizations. All payments are to be made by a/c payee demand draft drawn in favour of National Seminar (NTMIS) payable at SBI, REC Campus Branch, Rourkela - 8 (Code-2109). The participants willing to present papers in the Seminar may submit two copies of the abstract of each paper in not more than 300 words. It should be typed on one side of A4 size paper with one and half line spacing using 12pt Times New Roman font and 25 mm margin on all the four sides. It should include title of the paper, name of the author(s), mailing address including phone, fax and e-mail. The authors of selected papers may submit full length paper. Abstract and full paper can also be submitted by e-mail. For further details contact Dr. S. K. Patel, Organising Secretary, National Seminar (NTMIS) and Project Officer, NTMIS Nodal Centre, National Institute of Technology, Rourkela - 769008 (Orissa) Phone: 0661-2475091 (O), 2470344 (R), Fax: 0661-2475091, 2472926. E-mail: rkl_ntmisrkl@sancharnet.in; nodal@nitrkl.ac.in Website - http://nitrkl.ac.in/tmdu

National Convention on Libraries

The National Convention on DSIR Libraries and other Technical Libraries was held recently at the National Botanical Research Institute, (NBRI) Lucknow. The Convention was sponsored by NBRI in collaboration with Ranganathan Society for Book Culture Library and Informatics Studies (RAS) and Ranganathan - IASLIC Study Circle, Lucknow. The Live Documentary on Prof P N Kaula was telecast by the Doordarshan, Lucknow on the ocassion which was shown to over 300 delegates attending the convention and to other viewers on the National Channel.

The Documentary prepared by Doordarshan, Lucknow on the life and work of Prof P N Kaula has been titled *Kitabon ke Messiah*. The Documentary has recorded Prof Kaula's educational career in J&K State, Delhi, Chennai, Banaras and his work with Dr S R Ranganathan, his work associated with Aligarh Muslim University, University of Delhi, Banaras Hindu University, Ministry of Labour and Government of India and in associations and organisations. The Documentary has also recorded his publications including works on Kashmir, labour economics, student unrest and books and monographs journals founded and edited by him, special numbers of journals, the Festschrift Volumes brought out in his honour in 1974, 1984 and 1994, the work of Kaula Endowment for Library and Information Science, its Silver Jubilee Report and the recipients of International Awards. Prof Kaula annual award and Ranganathan - Kaula biennial award including the awards, honours and medals awarded and received by him too were recorded.

Extension Programmes at Barama College

A Free Health Check Up Camp was organised by the Extension Programme Cell under Internal Quality Assurance Cell of Barama College, Nalbari, Assam in collaboration with the Joint Director of Health Services, Nalbari. It was organised by Mrs. Mandita Devi, Secretary, Extension Programme Cell. Mrs. D.D. Chaudhary, President, Extension Programme Cell inaugurated the Camp. Nearly 473 patients from surrounding locality along with teachers, workers, students and society were treated and free medicines were distributed. Dr. B.N. Talukdar SDM&HO, Barama PHC supervised the Camp. Dr. B.K. Sharma, Dr. T.N. Sharma, Dr. L. Sharma. Dr. G. Patowary, Dr. H.C Kahita, Dr. G. Madhu and Dr. P.K. Sharma took part in the Camp. Dr. B.K. Sharma advised the patients to take care of common health problems in his speech.

National Seminar on Inclusive Education

A National Seminar on Inclusive Education was organised recently by the Department of Education, Kurukshetra University, Kurukshetra. Prof. John Elkins, Professor Emeritus, University of Queensland, who was the Chief Guest of the Occasion observed that inclusive education was aimed at including children with disabilities in main-stream schools. Prof. Elkins said that the education should be non-discriminatory. He said that the inclusive education was also aimed at seeking social justice and removing differences. He also threw light on the role of the task force of inclusive education.

In his presidential address, the Vice Chancellor of Kurukshetra University, Dr. A.K. Chawla, said that such seminars helped to increase awareness that disabled children had the right to education. He said that the government was trying to reach out to such children through the *Sarva Shiksha Abhiyan*. He informed that international forums had also realised the importance of inclusive education. Dr. R.S. Yadav, Director, Academic Staff College of the University, proposed a vote of thanks.

Teaching Session on International Humanitarian Law

The office of the United Nations High Commissioner for Refugees (UNHCR) is entrusted the task of protecting and assisting refugees world-wide. Since its inception in 1950, this has been the UNHCR's *raison d' etre*. Protection lies at the heart of the Office to find lasting solutions to the plight of refugees, and provides the context in which it carries out its relief activities. From the outset the UNHCR's humanitarian mandate was intended to be undertaken jointly with other members of the international community, NGOs and other partners. As its activities have increased, the UNHCR's relations with these partners have become increasingly important. Training officials, educators and the public on refugee issues is an essential activity by way of which the UNHCR promotes understanding on the principles and practice of refugee protection. The UNHCR established a chair on refugee law at the National Law School in 1995 which has been instrumental in spreading awareness and encouraging the teaching and research of refugee law in South Asia.

An independent humanitarian institution, the International Committee of the Red Cross ICRC is the founding body of the Red Cross. As a neutral intermediary in armed conflicts and disturbance, it attempts, either on its own initiatives or basing its actions on the Geneva Conventions, to provide protection and assistance to the victims. The Committee, which promotes the four Geneva Conventions of 1949 and their Additional Protocols of 1977, assumes the duties assigned to it by these international treaties and works for their application, dissemination and comprehension. It also encourages the development and promotion of International Humanitarian Law by the community of States. Around the world ICRC is working in more than 65 Countries. The ICRC Regional Delegation in New Delhi covers India, Bangladesh, Bhutan and Maldives. In close co-operation with the national partners and various law scholars, ICRC also promotes teaching and research of International Humanitarian Law in academic institutions.

The International Committee of the Red Cross (ICRC), the United Nations High Commissioner for Refugees (UNHCR), in collaboration with the National Law School of India University, Bangalore have been organizing since 1999 annual Teaching Sessions on International Humanitarian Law and Refugee Law for South Asian participants. Continuing the sequence, the Session for 2004 is being organized from May 12 to 25, 2004 in the campus of the National Law School of India University, Bangalore. The Law School, an acknowledged centre of excellence in the field of legal education, is a statutory law university established by the Bar Council of India, offering undergraduate and postgraduate courses.

The Session is open to researchers and lecturers from colleges and university faculties of law, human rights, international relations or defence studies in South Asia or persons associated with institutions or organizations dealing with these subjects including officials working with ministries/departments dealing with Humanitarian Law and Refugee issues. Those who have attended the earlier sessions are not eligible to apply. The applicants must be:

- citizens of Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan or Sri Lanka,
- under 40 years of age, though exceptions will be made for applicants who exhibit a proven interest in International Humanitarian Law or Refugee Law,
- proficient in written and spoken English.

A registration fee of Rs. 1000/- will be charged for the Session. Application forms for admission to the session may be submitted by February 15, 2004. The application forms and enclosures may also be submitted by e-mail address to new_delhi.del@ icrc.org. The form must be accompanied by a letter of recommendation from a teacher of international relations, human rights or international law. In case of persons associated with institutions/organizations, recommendation must be obtained from appropriate head of the institutions/organizations/departments. For further details contact the Legal Office, ICRC Regional Delegation for South Asia, 47, Sunder Nagar, New Delhi – 110003

Seminar on Journalism

A National Seminar on Journalism was organized recently by the Department of Journalism and Mass Communication, Kurukshetra University, Kurukshetra. Prof Richard Buttney of Syracuse University was the Chief Guest of the occasion. In his address Prof Buttney observed that communication played a vital role in social relationships. He said that social reality was shaped through communication in a cultural context. Prof. Buttney stressed the need for the media to become impartial and unbiased. He also opposed denationalization of news and objected to yellow journalism. Dr A K Chawla, Vice Chancellor, Kurukshetra University, stressed the need for academic and research related collaboration between Indian and foreign universities.

National Seminar on Sustainable Tourism Planning and Development

All India Tourism Teachers Association (AITTA), a recently constituted academic body, is organizing a National Seminar on Sustainable Tourism Planning and Development at Rishikesh, Uttranchal during March 1&2.,March 2004. Venue of the Seminar is Sheesamjhari Tourist Resort, Rishikesh, a unit of Garhwal Mandal Vikas Nigam Ltd. Rishikesh. The Seminar is being co-organised by Centre for Mountain Tourism established in 1976 as an integral part of the H.N.B. Garhwal University with a Course of P.G. Diploma in Tourism and Pilgrimage Studies. In 1982, the Department changed the nomenclature of Diploma into the P.G. Diploma in Tourism and Hoteliering. In 1991, the Department entered into the global market of tourism education by introducing for the first time the 'Master of Tourism Administration' programme (two year full time). The two-year M.T.A. course, divided into four semesters with 28 modules in all has been prepared to meet the need of tourism and hospitality trade operators. The Centre is devoted to:

- Actively pursue tourism research in academic and applied fields
- Create professionally competent manpower to meet the growing demand of the industry
- Initiate accord with and to radiate knowledge on tourism
- Generate and enhance awareness about quality tourism, eco-tourism and share expertise in ancillary services
- Provide an effective and practical platform for healthy interaction between the diverse sectors of tourism and the students

Tourism experts, business leaders, destination explorers, resort designers, decision takers and other related field scholars may contribute in the Seminar. All articles and research papers should be in English.

Three copies must be submitted to the Seminar Director with an abstract of not more than 200 words. The electronic version on disk should be sent with the paper to the Seminar Director. The hard copy and electronic files must match exactly. The technical sessions are:

- Ecotourism
- Water and winter sports tourism
- Yoga, meditation and spiritual tourism
- Sustainable tourism
- Resort and time sharing tourism

For further details please contact Dr. S.C. Bagri, Director, Centre for Mountain Tourism and Hospitality Studies, HNB Garhwal University Srinagar Garhwal (Uttranchal) - 246174; e-mail: bagri_sc@hotmail.com; # 01368-251051, 250115, Fax: 252247

Entrance Tests Made Compulsory by AICTE

The All-India Council for Technical Education (AICTE), New Delhi is reported to have made entrance tests compulsory for students seeking admission to institutes affiliated to the Council. According to the latest guidelines framed by the Council, fifty per cent of the available seats would be filled through entrance tests and the other half would be filled through centralised tests conducted by the nodal bodies that would be set up by the States. This means that no seat will be allotted to any student against the payment of a fee. The nodal bodies at the state-level would fix an amount for admission. The fee, of course, would be in tune with the general Constitutional sops. This amount may vary from one State to another.

The AICTE notified that the guidelines for its common entrance test, the All-India Engineering Entrance Examination (AIEEE), will be a binding for all States. The AIEEE will be conducted by the Central Board of Secondary Education (CBSE). According to its spokesperson Shri Rama Sharma, the system got going with effect from 2001 for the students seeking an all-India level ranking and have done well so far. By the recent notification the Council has only extended its jurisdiction.

The States, however, will be allowed to start the admission procedure for domicile students but that will have to be regulated by the nodal bodies under guidelines of the AICTE, Advisor (Administration). Such students will be given admission to colleges only in states they belong to and not in colleges in other States. The AICTE-approved tests, therefore, will be binding for the private colleges in all States.

Mathematics Conference

A National Conference on Mathematics was organized recently by Lucknow University, Lucknow in association with Bharatiya Ganita Parishad. The Conference was organised as part of the annual general body meeting of the Bharatiya Ganita Parishad. It was inaugurated by the Vice Chancellor Prof. S B Singh. Academics and experts from various parts of the country who attended the Conference expressed concern over the lack of quality research and development in higher mathematics in India. The experts called upon students and research scholars to take up study of newer streams of mathematics emerging globally.

Prof. Hukum Singh of the NCERT, while pointing out that all sciences were linked to Mathematics in some way or another, said that the country was lagging being as far developments in the field of Mathematics was considered. He said that the level of higher mathematics was dismal in the country. He advised students to take up the study of new and emerging streams of Mathematics. Prof S S Pujar said that the poor level of higher mathematics in the country was mostly due to the lack of funds for research work. He regretted that organisational assistance was lacking for such initiatives and said that it was up to the scholars and academicians to take up emerging streams of study. He pointed out that the work being done at a few institutes like IIT, Tata Institute of Fundamental Research, Indian Institute of Science, Bangalore, was really path breaking but lamented at the poor level of research at most universities.

Shanti Swarup Bhatnagar Award winner Dr. Uday Bhan Tiwari spoke on 'Isometric multiples' and Prof G S Pandey spoke on 'Frame multi-resolution analysis and infinite trees in Banach spaces of distribution'. Prof Pandey also expressed his disappointment with the level of research work going on in the country and said that wavelet analysis was a new development in mathematics and that it had many applications in Physics and Engineering Sciences, including signal analysis, used for tracking of missiles among other things. He said that the stream of research had many applications and could be taken up by academics and scholars for further development. The Bharat Ganita Parishad also elected Dr M.A Pathan as the new president of the Parishad besides other office-bearers.

Global Mega Varsity Network

A worldwide network of universities, called Global Mega University Net (GMUNET), was proposed at the

Global Summit of Mega Universities (universities with the highest enrolments) held in Shanghai, China recently. The Indira Gandhi National Open University (IGNOU), which is the largest mega university with an enrolment of 10.5 lakh students, will be part of the network. Director of the IGNOU Regional Centre Bangalore, Dr.B.P.R. Narasimharao, said that the network would promote mutual understanding among mega universities, and explore ways and means of cooperation.

The priority areas for collaboration among mega universities include open and distance learning, curriculum development, surveys of fluctuating market demand, employment of experts, information and communication technology, and infrastructure. Dr. Narasimharao said that there would be joint programmes and initiatives by participating universities at certificate, degree, and non-degree levels. The universities, which would be part of the network, intended to exchange information and evolve best practices for quality assurance and mechanisms.

"The network would provide a forum for ideas and developments in research, and facilitate the exchange of staff and students", he added. The summit decided to set up a liaison office and Secretariat for GMUNET, which would be shifted on rotation. The Secretariat would be at the Shanghai TV University till November 2004, after which it would be shifted to IGNOU. The president of Shanghai TV University, Prof. Zhang Deming, was elected Chairperson of GMU-NET, and the IGNOU Vice Chancellor, Prof. H.P. Dikshit, Co-chairperson. Regional Director, IGNOU, Lucknow Dr Sanjeev Pandey said that the main purpose of the summit was to develop a worldwide network called Global Mega University Net (GMUNET) to promote mutual under-standing and academic solidarity and explore ways and means of cooperation among mega universities.

Refresher and Orientation Courses at GNDU

UGC – Academic Staff College, Guru Nanak Dev University, Amritsar is going to organize the following Courses in the month of March, 2004 for college and niversity teachers:

Refresher Course in History from 4-3-04 to 24-3-04

General Orientation Course (60) from 1-3-04 to 28-3-04

Teachers interested in attending the courses may submit their applications on the prescribed proforma alongwith a demand draft of Rs. 500/- as registration fee (non-refundable) in favour of the Registrar, Guru Nanak Dev University, Amritsar payable at Amritsar. For the details contact Dr. S K Bhatia, Director, Academic Staff College, Guru Nanak Dev University, Amritsar (Pb.) Mobile 98144-61011.

National Seminar on Application of Mathematics in Engineering

National Seminar on 'Recent Trends and Applications of Mathematics in Engineering' is being organized by the Department of Mathematics, MEPCO SCHLENK Engineering College, Virudhunagar Dt. (TN) *during March 5 and 6, 2004. For further details* contact Dr. A Somasundaram, Organising Secretary, MEPCO SCHLENK Engineering College, Sivakasi, Mepco Engg. College (P.O.) – 626005 Virudhunagar Dt. (TN). Phone: 04562-289720, 289730, 23067. Fax: 04562 – 289520. Email: nsm2004@mepcoeng.ac.in. Website: www.mepcoeng.ac.in

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News From Agricultural Universities

Kisan Evam Pashu Mela

In spite of the fact that Animal Husbandry has special importance on account of paucity of agricultural industrial units and agricultural land, livestock owners are still unaware of novel researches being carried out in animal husbandry. It is a truth that on the one hand veterinary scientists are touching new heights in animal husbandry, whereas on the contrary the agriculturists are rearing their animals on conventional patterns. To bring about a proper reconciliation, one day *Kisan and Pashu Mela* was organised at the Himgiri Stadium of Latibunga village near Mukteswar under the aegis of Indian Veterinary Research Institute, to develop awareness and provide farmers and livestock owners proper guidance. The Mela was inaugurated by Dr. M.P. Yadav, Director, IVRI. It was attended by Smt. Shanti Bisht, Block Pramukh, Dhari, Scientists of Indian Veterinary Research Institute, Central Avian Research Institute, Central Institute on Tropical Horticulture and Vivekanand

Parwatiya Krishi Anusandhan Sansthan and 500 farmers and school children.

On this occasion, Dr. Yadav called upon farmers to get their problems resolved while discussing them with the scientists of IVRI, Mukteswar Campus and to acquire new information of animal husbandry to increase their income. He also asked women to come into the main stream of society while earning more. He assured farmers of all sorts of help from IVRI.

Dr. S.K. Bandopadhyay, Joint Director (Acad.) apprised everybody with the historical details of IVRI and asked them to be benefited from the institute. Station In-charge, IVRI, Mukteswar invited the farmers to visit Mela every year and get benefited from it. All the participating institutes displayed their exhibitions which were visited by Dr. M.P. Yadav. The exhibitions include Pashmina Goats of IVRI, various types of poultry of CARI, various types of grains and seeds from VPKAS, fruits from CITH, papad, chips, etc. from Girdeep and woolen shawl, various types of pulses from Chirag.

A *Kisan Gosthi* was also organised during the Mela. The *Gosthi* was attended by specialists from various institutes. They also solved the problems of farmers. In the Gosthi, Dr. M.C. Sharma spoke on 'Deficiency of Minerals in Animals and Remedy', while Dr. D. Swamp spoke on 'Main Diseases and their Remedies in Uttaranchal', Dr. S.K. Agarwal spoke on 'Reproductive Problems' and Dr. R.K. Verma lectured on 'Ploughing Problems of Apples in Uttaranchal and their Solutions'.

Besides, best stall competition, debate and question answer competition for women, organic products competition, best cow, buffalo, sheep, goat, dog, etc. competitions were also organised. During the Mela, animals suffering from mastitis, haematuria, skin diseases, infertility, parasitic diseases, deficiency of minerals were found and around one hundred animals were treated and medicines were also distributed free of cost.

(Contd. from page no. 10)

APPENDIX

What is your Intuitive Ability?

1. When working on a project, do you prefer to:
   a. Be told what the problem is, but left free to decide how to solve it.
   b. Get very clear instructions about how to go about solving the problem before you start.
2. When working on a project, do you prefer to work with colleagues who are:
   a. Realistic
   b. Imaginative
3. Do you admire people most who are:
   a. Creative
   b. Careful
4. Do the friends you choose tend to be:
   a. Serious and hard working
   b. Exciting and often emotional
5. When you start your day, do you usually:
   a. Seldom or never get upset if he/she questions your basic assumption
   b. Often get upset if he/she questions your basic assumption
6. When you start your day, do you usually:
   a. Seldom make or follow specific plan
   b. Make a plan first to follow
7. When working with numbers, do you find that you:
   a. Seldom or never make factual errors
   b. Often make futual errors
8. Do you find that you:
   a. Seldom daydream during the day and really don't enjoy doing so when you do it.
   b. Frequently daydream during the day and enjoy doing so
9. When working on a problem do you:
   a. Prefer to follow the instructions or rules when they are given to you.
   b. Often enjoy circumventing the instructions or rules when they are given to you.
10. When you are trying to put something together, do you prefer to have:
    a. Step-by-step written instructions on how to assemble the item
    b. A picture of how the item is supposed to look once assembled
11. Do you find that the person who irritates you the most is one who appears to be:
    a. Disorganized
    b. Organized
12. When an unexpected crisis comes up that you have to deal with, do you:
    a. Feed anxious about the situation
    b. Feel excited by the challenge of the situation ❑

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities
(Notifications received in AIU during November - December, 2003)

AGRICULTURAL & VETERINARY SCIENCES

Agricultural Extension

1. Deboral Vimala, D. **Training needs of shrimp farmers in Tamil Nadu.** (Dr S Ramachandran), Department of Agricultural Extension, Anna University, Chennai.

Horticulture

1. Horo, Punam. **Effect of micro-irrigation systems in okra (Abelmoschus esculentus(L.) Moench) in Jharkhand.** Department of Horticulture, Birsa Agricultural University, Ranchi.

BIOLOGICAL SCIENCES

Biotechnology

1. Gupta, Mamta. **Study of cellular drug resistance in philadelphia chromosome positive acute lymphoblastic leukaemia.** (Dr Anil Kumar), Department of Biotechnology, Devi Ahilya Vishwavidyalaya, Indore.

2. Kannan, K. **Identification, cloning, expression and characterisation of brugia malayi thioredoxin homologue.** (Dr P Kaliraj), Department of Biotechnology, Anna University, Chennai.

3. Santhosh, M. **Cloning, expression, purification and characterisation of pneumococcal toxin pneumolysin.** (P Kaliraj), Department of Biotechnology, Anna University, Chennai.

4. Sundaram, S Meenakshi. **Process optimization strategies for biopesticide production from bacillus.** (Dr P Kaliraj), Department of Biotechnology, Anna University, Chennai.

Botany

1. Kamendra Singh. **Studies on nutritional and other factors on flowering in tropical dendrobrium species.** (Dr A M Mungikar), Department of Botany, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

2. Patel, Sureshkumar Karmshibhai. **A contribution to the flora of Meghraj and Malpur talukas of Sabarkantha District of North Gujarat.** (Dr D C Bhatt), Department of Botany, Hemchandracharya North Gujarat University, Patan.

3. Sharma, Kavita A. **Use of remote sensing techniques for grassland mapping.** Department of Botany, Maharaja Sayajirao University of Baroda, Vadodara.

Cellular & Molecular Biology

1. Rave Sanker, E. **In vitro approach to delineate molecular cross talk between epithelial and monocytic cells leading to apoptosis in tropical pulmonary eosinophilia.** (Dr Arun Balakrishnan), Department of Cellular and Molecular Biology, Anna University, Chennai.

Microbiology

1. Kashyap, Des Raj. **Production, purification, characterisation and applications of an alkalophilic, thermotolerant pectinase from a mesophilic bacillus SP.DT7.** (Dr Rupinder Tewari and Dr S K Soni), Department of Microbiology, Panjab University, Chandigarh.

2. Vaidya, Rajivkumar Jayvadan. **Studies on chitinase based biocontrol of pigeonpea wilt by alcaligenes xylosoxydans.** Department of Microbiology, Maharaja Sayajirao University of Baroda, Vadodara.

Zoology

1. Billore, Kiran. **Studies on the zooplanktons of Govind Ballabh Pant Sagar Singrauli, Sidhi with special reference to impact of pollution.** (Dr N P Tripathi), Department of Zoology, Awadhesh Pratap Singh University, Rewa.

2. Gaikwad, Prakash Tatyaba. **Biology of a freshwater fish in relation to pollution.** (Dr S B Wagh), Department of Zoology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

3. Gornalkar, Shivraj Tippanna. **Investigation on breeding and pathogenic conditions in some fishes.** (Dr Meena U Patil), Department of Zoology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

4. John, C C. **Studies on the fresh water mites of Kerala.** (Dr N D Inasu), Department of Zoology, University of Calicut, Calicut.

5. Karmaly, K A. **Systematic studies on some sub families of formicidae (Hymenoptera) of Kerala at the alpha level.** (Dr T C Narendran), Department of Zoology, University of Calicut, Calicut.

6. Mandy, Tessy J. **Systematics and bionomics of edible perches of Central Kerala.** (Dr N D Inasu), Department of Zoology, University of Calicut, Calicut.

7. Patel, Pushpa. **Studies on the morphology and cytology of certain digenetic trematodes of plagiorchidae family of Vindhya Region.** (Dr N P Tripathi), Department of Zoology, Awadhesh Pratap Singh University, Rewa.

8. Sadanandan, Mary Anithalatha. **Studies on acarine predators of North Kerala.** (Dr N Ramani), Department of Zoology, University of Calicut, Calicut.

9. Sangeeta. **Histopathological and biochemical studies on monocrotophos toxicity in mice and its modulation with Vitamins E and C.** (Dr P K Mittal and Dr Ravi Kiran), Department of Zoology, Panjab University, Chandigarh.

10. Shaikh Ayub Maheboob. **Heavy metals contents in the intertidal gastropod molluscs from the coastal of Ratnagiri, West Coast of India.** (Dr A K Khan), Department of Zoology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

11. Sutar, Abulkalam Usman. **Studies on reproduction and breeding behaviour in freshwater crustaceans from Krishna River.** *(Dr Meena U Patil)*, Department of Zoology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

EARTH SYSTEM SCIENCES

Environmental Science

1. Gaur, Anita. **A geomorphic appraisal of land use and their evaluation with reference to geo-environmental aspects in Gwalior District of MP.** (Prof U C Singh), Department of Environmental Science, Jiwaji University, Gwalior.

2. Mishra, Bhupesh Kumar. **Noise pollution and its behavioural effects on human beings in Rewa and Satna Regions.** (Prof V S Sai), Department of Environmental Science, Awadhesh Pratap Singh University, Rewa.

3. Mohaideen, J Abbas. **A study on integrated hazardous waste management.** (Dr M Rajendran), Department of Environmental Science, Anna University, Chennai.

4. Pandy, Arvind Anand. **Geoenvironmental study of the area around Rajghat Dam Project District Lalitpur, UP and Guna, MP.** (Prof U C Singh), Department of Environmental Science, Jiwaji University, Gwalior.

5. Prameena Sheeja, J L. **Studies on removal and recovery of heavy metals from industrial effluents.** (Dr P Selvapathy), Department of Environmental Science, Anna University, Chennai.

6. Rasool Mohideen, F. **Petrographic, physico-chemical and engineering properties of tertiary sediments of Neyveli Basin, Tamil Nadu, India.** (Dr R Nagendra), Department of Environmental Science, Anna University, Chennai.

7. Santhy, K. **Removal of heavy metals and reactive dyes from industrial effluents by adsorption on coir pith activated carbon.** (Dr P Selvapathy), Department of Environmental Science, Anna University, Chennai.

8. Sharma, Sapna. **Studies on weeds of rabi crops with a particular emphasis on ecology and their control.** (Dr R N Shukla), Department of Environmental Biology, Awadhesh Pratap Singh University, Rewa.

Geology

1. Nagarajan, R. **Geochemistry and depositional environment of neoproterozoic sediments of Bhima Basin, Northern Karnataka, South India.** (Dr R Nagendra), Department of Geology, Anna University, Chennai.

2. Shanmugam, P. **Multi-sensor image analysis and subpixel classification for improved coastal mapping.** (Dr S Sanjeevi), Department of Geology, Anna University, Chennai.

3. Thirunavukkarasu, Nagalakshmi. **Studies on quaternary stratigraphy and palaeoenvironments between Palar and Koratallaiyar River Basin, Chennai, Tamil Nadu.** (Dr Hema Achyuthan), Department of Geology, Anna University, Chennai.

Marine Science

1. Geetha, R. **Modelling of geochemical processes in mangrove ecosystem.** (Dr N Chandramohanakumar), Department of Marine Science, Cochin University of Science and Technology, Kochi.

2. Satheesan, K. **Studies on tropical lower atmospheric turbulence and tropical tropopause.** (Dr K R Santhosh), Department of Marine Science, Cochin University of Science and Technology, Kochi.

ENGINEERING SCIENCES

Ceramic Technology

1. Sivakumar, V. **Development and characterisation of sol-gel derived zirconia andzirconia based ceramics.** (Dr V Kamaraj), Department of Ceramic Technology, Anna University, Chennai.

Chemical Engineering

1. Anand Prabu, A. **Studies on development and characterisation of hybrid epoxy unsaturated polyester coatings for corrosion resistant applications.** (Dr M Alagar), Department of Chemical Engineering, Anna University, Chennai.

2. Muthukumar M. **Optimization of aggregate mix proportion and studies on furan polymer concrete mix design.** (Dr D Mohan), Department of Chemical Engineering, Anna University, Chennai.

3. Partha, N. **Utilisation of agroindustrial wastes.** (Dr V Ramamurthi), Department of Chemical Engineering, Anna University, Chennai.

4. Pugalenthi, V. **Biodegradation kinetics of benzene, toluene, ethylbenzene and o-xylene (BTEX) in the presence of non-ionic surfactants by micrococcus, Sp., pseudomonas putida HC-1 and bacterial consortia.** (Dr M Velan), Department of Chemical Engineering, Anna University, Chennai.

5. Sivakumar, V. **Hydrodynamic studies in cocurrent gas liquid upflow through packed beds.** (Dr T Murugesan), Department of Chemical Engineering, Anna University, Chennai.

Civil Engineering

1. Chandrasekaran, E. **Studies on free vibration of polymer composite aircraft instrument panel boards.** (Dr K Jayaraman), Department of Civil Engineering, Anna University, Chennai.

2. Gunasekaran, K. **Congestion modelling for a heterogenous traffic: A case study.** (Dr A M Thirumurthy), Department of Civil Engineering, Anna University, Chennai.

3. Ramachandra, V. **A comprehensive study of the compsoite behaviour of wall-beam and wall-frame systems subjected to vertical loading.** (Dr R Jagadish), Department of Civil Engineering, Bangalore University, Bangalore.

4. Sivakumar, P. **Knowledge-based optimisation of steel lattice towers using genetic algorithms.** (Dr G M Samuel Knight), Department of Civil Engineering, Anna University, Chennai.

Electrical Engineering

1. Anandanatarajan, R. **On control of a first order nonlinear process with dead time.** (Dr T Jayasingh), Department of Electrical Engineering, Anna University, Chennai.

2. Himavathi, S. **Hybrid fuzzy modeling and implementation for deterministic systems from input-output data.** (Dr B Umamaheswari), Department of Electrical Engineering, Anna University, Chennai.

3. Raja, J. **Studies on switch fabric architectures and cell loss recovery mechanisms in ATM networks.** (Dr S Shanmugavel), Department of Electrical Engineering, Anna University, Chennai.

4. Rominus Valsalam, S. **Modelling, simulation and adaptive optimal control of a 210 MW Boiler.** (Dr S Renganathan), Department of Electrical Engineering, Anna University, Chennai.

5. Srinivasan, E. **Some nonlinear filtering strategies for eliminating uniform, gaussian and impulse noise in images with edge and fine detail preservation properties.** (Dr D Ebenezer), Department of Electrical Engineering, Anna University, Chennai.

6. Vasudevan, N. **VLSI Design of high speed ATM switch on a chip.** (Dr S Renganathan), Department of Electrical Engineering, Anna University, Chennai.

Electronics Engineering

1. Thanikaivelan, P. **Approach towards zero discharge tanning methods.** (Dr J Raghava Rao), Department of Electronics Engineering, Anna University, Chennai.

Information & Communication Engineering

1. Bhuvaneswaran, R S. **Collision avoidance and energy efficient protocol solutions to the distributed system of wireless sensor networks.** (Dr V Rhymond Uthhariaraj), Department of Information and Communcation Engineering, Anna University, Chennai.

2. Chandramathi, S. **Estimation of QoS parameters and bandwidth allocation in ATM networks: A fuzzy approach.** (Dr S Shanmugavel), Department of Information and Communication Engineering, Anna University, Chennai.

3. Sudhakara Rao, P. **Online fruits sorting based on external quality parameters using machine vision.** (Dr S Renganathan), Department of Information and Communication Engineering, Anna University, Chennai.

4. Uma Maheswari, V. **Classification models for web usage mining.** (Dr Arul Siromoney), Department of Information and Communication Engineering, Anna University, Chennai.

Mechanical Engineering

1. Dhinesh Kumar, K. **Methodology for the implementation of integrated automation system.** (Dr L Karunamoorthy), Department of Mechanical Engineering, Anna University, Chennai.

2. Jose, S. **Development of an effectiveness improvement model for technological institutions using Taguchi technique.** (Dr L Suganthi), Department of Mechanical Engineering, Anna University, Chennai.

3. Ramakrishnan, M. **Developmental studies on steel lined composite compressed natural gas (CNG) cylinders.** (Dr P Baskaran), Depatment of Mechanical Engineering, Anna University, Chennai.

Polymer Science

1. Ushamani, M. **Studies on photosensitive polymers for optical recording.** (Dr Rani Joseph, Dr C Sudha Kartha and Dr Sreekumar K), Department of Polymer Science, Cochin University of Science and Technology, Kochi.

Textile Technology

1. Muthukumar, M. **Studies on ozonation and advanced oxidation of acid dye effluents.** (Dr N Selvakumar), Department of Textile Technology, Anna University, Chennai.

MATHEMATICAL SCIENCES

Mathematics

1. Anbarasu, S. **Some contributions to DNA computing and its applications.** (Dr G Sethuraman), Department of Mathematics, Anna University, Chennai.

2. Arivudainambi, D. **Stochastic analysis of some retrial and feedback queueing systems with disasters.** (Dr B Krishna Kumar), Department of Mathematics, Anna University, Chennai.

3. Assia, N V. **Fuzzy absolutes and related topics.** (Dr T Thrivikraman), Department of Mathematics, Cochin University of Science and Technology, Kochi.

4. Joshua, Varghese C. **Retrial queues with orbital search.** (Dr A Krishnamoorthy), Department of Mathematics, Cochin University of Science and Technology, Kochi.

5. Kiwane, Sakharam Bhujangrao. **On mathematical problems from convection-diffusion and combustion theory.** (Dr D B Dhaigude), Department of Mathematics, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

6. Sreekumar, R. **Some generalisations of fuzzy metricability.** (Dr R S Chakravarti and Dr T Thrivikraman), Department of Mathematics, Cochin University of Science and Technology, Kochi.

7. Vijayakrishnan, S. **On some infinite convex invariants.** (Dr R S Chakravarti and Dr T Thrivikraman), Department of Mathematics, Cochin University of Science and Technology, Kochi.

Statistics

1. Patil, Aruna Bholenath. **Some statistical problems in demography related to Nashik City.** (Dr M B Joshi), Department of Statistics, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

MEDICAL SCIENCES

Ayurveda

1. Kalchuri, Gajendra Singh. **Gandhak ka pama kandu rog per chikitsakiya prabhav ka ek adhyayan.** (Dr R D Thakkur), Department of Ayurveda, Awadhesh Pratap Singh University, Rewa.

Pharmaceutical Science

1. Patel Chhaganbhai Nanjibhai. **Determination of antihypertensive agents by acid-dye method in their pure powder, dosage forms and biological fluid.** (Dr B N Suhagia), Department of Pharmaceutical Science, Hemchandracharya North Gujarat University, Patan.

2. Patel, Natvarlal Manilal. **Studies on hepato protective and other pharmacological investigation of selective traditional plant drugs.** (Dr G C Bhavsar), Department of Pharmaceutical Science, Hemchandracharya North Gujarat University, Patan.

Physiology

1. Bhahmbhatt, Sheela Rajesh. **Epidemiological assessment of iodine deficiency disorders by clinical and bio-chemical prevalence indicator in Gujarat, Himachal Pradesh and Tamil Nadu.** Department of Physiology, Maharaja Sayajirao University of Baroda, Vadodara.

2. Pandya, Kaushik Dashrathrai. **A descriptive analysis of expiratory and inspiratory parameters of respiration during normal pregnancy.** Department of Physiology, Maharaja Sayajirao University of Baroda, Vadodara.

PHYSICAL SCIENCES

Biochemistry

1. Pratibha Kumari. **Prognostic value of cytokines in cervical cancer.** (Dr B Nagarajan), Department of Biochemistry, Anna University, Chennai.

2. Sofi, Mohd Hanief. **Immunoregulatory properties of surfactant like particles from rat intestine.** (Dr Akhtar Mahmood and Dr Siddharth Majumdar), Department of Biochemistry, Panjab University, Chandigarh.

Chemistry

1. Abdurahiman, K K. **Kinetic studies on the oxidation and catalysis of aromatic aldehydes using sodium hypochlorite.** (Dr T D Radhakrishnan Nair), Department of Chemistry, University of Calicut, Calicut.

2. Borgohain, Saswati. **Synthesis and characterisation of some polyamideimides and polyesterimides.** (Dr S Hussain), Department of Chemistry, Dibrugarh University, Dibrugarh.

3. Eswara Moorthi, I. **Hydroisomerisation of n-Hexane and n-Heptane over Ni-Pt loaded zeolites and zeotype molecular sieves.** (Dr N Lingappan), Department of Chemistry, Anna University, Chennai.

4. Guhanathan, S. **Studies on toughening of fly-ash based polyester particulate composites.** (Dr M Saroja Devi), Department of Chemistry, Anna University, Chennai.

5. Jaisankar, S N. **Thermomechanical, morphological and rheological studies on compatibilized TPU/SAN blends.** (Dr Ganga Radhakrishnan), Department of Chemistry, Anna University, Chennai.

6. Marykutty, P V. **Transition metal chelates of Schiff bases.** (Dr Geetha Parameshwaran), Department of Chemistry, University of Calicut, Calicut.

7. Meera, K. **Growth and characterisation of doped triglycine sulfate and L-Arginine hydrochloride crystals and the effect of EDTA addition on the growth of crystals from solution.** (Dr P Ramasamy), Department of Chemistry, Anna University, Chennai.

8. Munde, Shivaji Baburao. **Synthesis of bridgehead or fused heterocycles.** (Dr R A Mane), Department of Chemistry, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

9. Patel, Anita. **Studies on morpho-physiological variability and nutrient up take in relation to applied phosphorus levels and plant growth regulators on black gram (vigna munge L. Hepper).** (Dr K B L Shrivastava), Department of Chemistry, Awadhesh Pratap Singh University, Rewa.

10. Ramya, K. **Electrochemical studies of titanium based metal hydride alloys.** (Dr B Sivasankar), Department of Chemistry, Anna University, Chennai.

11. Suryawanshi, Ashok Tukaram. **Synthesis, chemistry and evaluation of biological activity of fused nitrogen and sulfur heterocyclic compounds.** (Dr S V Kuberkar), Department of Chemistry, Swami Ramanand Teerth Marathwada University, Nanded.

12. Vinu, A. **Pore size engineering and characterisation of modified SBA-1,SBA-15, MCM-41 and mesoporous carbon molecular sieves: A study of protein adsorption.** (Dr V Murugesan), Department of Chemistry, Anna University, Chennai.

Photonics

1. Unnikrishnan, K P. **Z-scan and degenerate four wave mixing studies in certain photonic materials.** (Dr C P Girijavallabhan), Department of Photonics, Cochin University of Science and Technology, Kochi.

Physics

1. Ashok, M. **Investigations on the crystallisation of calcium phosphate biomaterials and the trace element analyses of the urinary stones and gallstones.** (Dr D Arivuoli), Department of Physics, Anna University, Chennai.

2. Eappen, Shibu M. **Laser spectroscopy: Tdlas instrumentation and NIR analysis of some organic materials.** (Dr K P Rajappan Nair), Department of Physics, Cochin University of Science and Technology, Kochi.

3. Ebenezar, J. **Optical biopsy of cancer using native fluorescence spectroscopy.** (Dr P Aruna), Department of Physics, Anna University, Chennai.

4. Jaya Arun, T K. **High pressure studies on GaN and some wide band gap semiconductors.** (Dr N Victor Jaya), Department of Physics, Anna University, Chennai.

5. Mangani, I Ruth. **Synthesis and characterisation of metal-ion doped spinels as cathode for lithium batteries.** (Dr S Selladurai), Department of Physics, Anna University, Chennai.

6. Sardar, Sandhya Yuvraj. **Dynamics of electrolytes in biological systems through permittivity.** (Dr S C Mehrotra), Department of Physics, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

7. Vasanthi, R. **Synthesis and characterisation of lithium cobalt based bulk and thin films for battery applications.** (Dr S Selladurai), Department of Physics, Anna University, Chennai.

8. Victoria, E Caroline. **Studies on synthesis and evaluation of mechanical properties of spark plasma and pressureless sintered hydroxyapatite based bioceramics.** (Dr F D Gnanam), Department of Physics, Anna University, Chennai. ❑

Compiled by
Ms. Surinder Chawla

BANNARI AMMAN INSTITUTE OF TECHNOLOGY

Sathyamangalam - [illegible] Erode District Tamil Nadu
[illegible]
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Created to develop exceptional opportunities for professionals and to mould young minds for the future, Bannari Amman Institute of Technology (B.I.T.) has emerged as a World Class state-of-the-art institution at Sathyamangalam, an hour drive from either Coimbatore Airport or Erode Railway Station. The Campus has excellent infrastructure with a large Computerized library of more than 40,000 books & 300 journals, Air-conditioned Central computing facility with 600 nodes. High speed Internet connectivity to all the departments. Free furnished quarters, Well-equipped hospital, Bank with ATM facilities, English Medium school. Uninterrupted power & water supply, yoga and recreational centres & a host of other facilities. Given the infrastructural facility and backed up by a powerful business conglomerate of Rs 1500 crore Bannari Amman Group, the institute now wants to augment its faculty, for which Applications are invited for the Posts of

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In the following Departments

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[illegible] Electronics Engg.

QUALIFICATION : **For Professors & Assistant Professors :** Ph.D. Degree with first class in Bachelor's / Master's level in the appropriate branch of Engg. / Technology.

EXPERIENCE

For Professors :
10 years in Teaching/ Industry / Research, out of which 5 years must be at the level of Assistant Professor and / or Equivalent.

For Assistant Professors :
5 years in Teaching / Industry / Research, out of which 3 years must be at the level of Senior Lecturer and / or Equivalent.

PAY SCALES :
Revised AICTE scales of pay plus DA + PPF

Perquisite :
Rent - Free quarters

EMOLUMENTS :
Not a constraint for Candidates with exemplary academic record and deep interest in teaching and research. Retired persons below the age of 60 years may also apply

Interested persons may send their applications to **The Adviser, Bannariamman Educational Trust,** 252, Mettupalayam Road, Coimbatore - 641 043, Tamilnadu **Phone : 0422 - 2432957, 2450045** on or before **27.02.2004.**

HOMI BHABHA CENTRE FOR SCIENCE EDUCATION
TATA INSTITUTE OF FUNDAMENTAL RESEARCH
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Research Scholarships

HBCSE, a National Centre of TIFR, is looking for committed post-graduates for its PhD programme in Science Education, 2004. The Centre is devoted to R & D in science and mathematics education from primary to introductory college level. Its activities are informed by research in cognitive, historical and socio-cultural aspects of science education.

Recent M.Sc.'s (or those in their final year) in any of the physical/ chemical/ biological/ earth sciences or mathematics/ statistics/ computer science, with a consistently good academic record are eligible to apply. Research scholars are offered a fixed monthly scholarship of Rs. 8,000/- (enhanced to Rs. 9500/- after registration) and an annual contingency grant of Rs. 7,500/-. Admissions are for a year, renewable annually for up to 5 years. Accommodation on campus may be provided at nominal cost.

For application forms and details, please write to Sr. Administrative Officer, Homi Bhabha Centre for Science Education, TIFR, V.N. Purav Marg, Mankhurd, Mumbai 400 088, enclosing a 25.5cm x 15.5cm self-addressed envelope affixed with stamps for Rs. 10/-. Alternatively you may download the form from our website: http://www.hbcse.tifr.res.in. Completed forms should be sent by post along with a demand draft of Rs. 300/, payable at Mumbai in favour of Homi Bhabha Centre for Science Education, latest by April 15, 2004.

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(Department of Ocean Development, Government of India)
Headland Sada, Vasco da Gama, Goa 403804

Subject: Invitation for scientific proposals for Annual Indian Scientific Expeditions to Antarctica

1. The National Centre for Antarctic & Ocean Research (Department of Ocean Development) sends scientific expedition to Antarctica every year. The Twenty fourth Indian Scientific Expedition to Antarctica will be launched in December, 2004 and will consist of summer team which will return to India in March 2005 and a winter team which will return to India in March 2006. Subsequent expeditions shall be launched accordingly.
2. The National Centre for Antarctic & Ocean Research (NCAOR) invites scientists/researchers/engineers to submit research proposals (in enclosed PRESCRIBED FORMAT) for undertaking front ranking scientific experiments in Antarctica in various inter-disciplinary fields/themes for 24th (2004-2005), 25th (2005-2006) and 26th (2006-2007) Indian Antarctic expeditions. Thrust areas under various themes of polar science are provided below:-

(i) Meteorology & Atmospheric Sciences

- Whistler / VLF, riometer, electrical and geomagnetic studies.
- Sky image camera for optical aeronomical & auroral studies.
- Sophisticated instrumentation of digital ionosonde and phase path observation. The ionosonde can form a major element of space weather programme.
- Ground based (Brewer Spectrophotometer) and balloon borne studies of ozone and other trace gases including UVB radiation.
- The experiments on aerosol radiative forcing as a part of climate studies / change program.
- A LIDAR program for monitoring polar stratospheric clouds (ozone depletion) and monitoring middle atmospheric temperatures, waves and polar vortex (for ozone depletion and global warming studies).
- Infra red gas analyser, gas chromatograph and Fourier transform spectrometer for measuring of green house gases including water vapour.
- Climatological data archival and data utilisation for predictive modelling.
- Planetary boundary layer studies to monitor long term changes, if any and also access environmental impact, if any.
- Katabatic flow, snow drift and energy balance radiation studies using AWS.
- Studies on ice sheet - atmosphere interaction and surface climatology of Antarctica for modelling studies (tele-connections with monsoons).
- Automated tracking of synoptic and mesoscale weather system using operational satellite systems for now casting.
- Southern hemisphere cyclones and sea-ice links.
- Astronomical/ Astrophysical observations.

ii) Earth Science & Glaciology

- Geological & geophysical studies.
- Thematic studies of granulitic rocks, Proterozoic metamorphites, charnokites, orthogneisses, intrusive granite, mafic dykes, anorthosite etc.
- Correlation between east and west parts of CDML as also with other areas of east Antarctica and related Gondwanaland fragments.

- Ice core drilling for paleo-environmental studies (mission mode project).
- Studies of lacustrine sediments/cores for palaeo environmental studies.
- Airborne/landborne geophysical surveys with multi sensors, including ice probe radar - transects and grid survey.
- Studies on Antarctic neotectonics activities employing GPS, seismic and other tools.
- Studies of satellite imageries for ice sheet fluctuations.
- Fluid inclusion studies on high-grade granulites.

iii) Biology & Environment Sciences

- Primary, secondary production and population dynamics of lakes.
- Carbon cycle of lake eco-systems.
- Interaction between lake and glacial melt water inputs.
- Role of benthic algal mats in the nutrient cycle.
- Sea-ice microbial community structure and bio diversity.
- Contribution of microbial community to water column productivity.
- Dynamics and energetics of these communities.
- Study of physiological and molecular basis of adaptation of the flora and fauna.
- Identify and isolate enzymes which are active at low temperatures (mission mode).
- Identify and isolate molecules which have an anti microbial activity.
- GIS based wild life census and cataloguing of shore line and pack ice regions.
- Population dynamics and behaviour of avian fauna.
- Temporal variation of wild life as an environmental index.
- Identification of areas of SPA and SSSI on the basis of wild life value.
- Continuous monitoring and conservation of soil, water and air qualities.
- Environmental audit and impact of waste management protocol.
- Develop oil handling, storage, spill and other emergency handling protocols.
- To extend assessment of EIA from local to regional levels.
- Generate baseline data for CEE / EIA studies in new areas of operation.

iv) Human Physiology & Medicine

- Studies on molecular mechanism of acclimatisation.
- Assessment of nutritional requirement of expedition members.
- Study of apoptosis and ageing factor under cold conditions.
- Study of magnetic influence on psycho-physiological aspects.
- Framing out of work-rest schedule for members.
- Comparative studies of human behaviour and physiological / psychological changes in Antarctica with that of Arctic region.

v) Engineering & Communication

- Application of non-conventional energy sources (wind, solar, fuel cells).
- Application of VLF and ULF propagation as communication tools.
- Development of long distance and cold region communication technology.
- Development of incinerators, vehicles, life support systems for cold region utility.

- Automatic conditioning monitoring and remotely operated systems.
- Video conferencing.
- Development of indigenous kit clothing for cold region utility.

3. Research programme in the field of Southern Ocean Oceanography & allied branches of science including logistics requirement may also be submitted. which may be considered for the future southern Ocean cruises as and when planned. Besides above themes & thrust areas, the sound proposal in any other scientific field / topic may also be submitted for consideration.
4. Those organisations who have already submitted their LONG TERM programme to NCAOR last year (2003) need not to submit their proposal afresh. However, if any additional programme / information is proposed the same can be submitted to NCAOR giving the reference of earlier submitted proposal. Those who had submitted their proposal only for 23rd IAE and were not recommended for 23rd IAE need to submit their research proposal afresh if intend to participate in 24th IAE. All these organisations / P.Is have to present their proposal before the Group of Experts as and when invited. All those who intend to participate henceforth in any Antarctic expedition have to provide a Declaration (in enclosed PRESCRIBED FORMAT) duly endorsed by the Head of their respective Organisation for depositing a copy of all data, samples (as far as practicable), information collected / generated during or after the expedition is over to NCAOR/DOD for the data archival at National Antarctic Data Centre of NCAOR, Goa.
5. Proposals for summer and winter periods are invited in the above areas of research. While framing the proposal, repetition of scientific work already carried out from the Indian station 'Maitri' in Antarctica should be avoided. Due consideration has to be given to the fact that the experiments have to be carried out within the logistic infrastructure available at 'Maitri' and should be limited to around 150 kms radius of the station. The proposal should be succinct, indicating the following:
   i) the scientific aims and objectives with illustrations and references;
   ii) expected results and their relevance;
   iii) state of the art experiments in the international scenario;
   iv) if an on going programme, its accomplishments till date;
   v) time frame of the project (summer/winter) with milestones;
   vi) the team component (summer/winter) & logistic requirements;
   vii) any national/international collaborations envisaged;
   viii) proposal should have the complete biodata of the proposer(s) in enclosed prescribed format along with names of two referees. The P.I. should be a permanent employee and must have sufficient experience in the relevant field.
   ix) There should be a long term research programme (2 - 4 yrs.) to be undertaken by concerned PI/ Organisation/Institute with institutional commitment.

5 (a) The regular participating organisations (like NGRI, GSI, BSI, ZSI, SASE, NPL, B.U., IMD, DIPAS, IIG, NBRI & others) have to submit their long term research programme for 3 years (if not submitted so far). However year wise (expedition wise) proposed activities should be properly spelled out.

(b) Those organisation / Institutes which are submitting their proposal for first the time should submit their long term research programme for 3 years. However, year wise (expedition wise) proposed activities should be properly spelled out. The new proposal with the commitment of their respective institutes for long-term research programme to be undertaken in Antarctica shall be given preference.

(c) Nominees recommended should be physically fit to work in extreme sub zero temperatures and harsh conditions and should not have any ailments and illnesses which is likely to have an adverse effect or related problems. A medical fitness certificate from a Civil Surgeon of a Government Hospital must accompany all nominated

(d) Nominees must be able to and willing to cooperate in cargo handling operations and station maintenance activities. They should also be willing to assist in expedition activities outside their assigned scientific tasks.

(e) All nominated membes should be prepared to stay in accommodation on sharing basis, as may be available in the ship or in the Antarctic Station/Camps.

(f) All nominated scientists, especially those likely to be involved in outdoor activities must be able to cook a simple meal, and should have knowledge of first aid.

(g) It is also necessary to ensure that summer nominees have a work programme which is likely to take at least 45 days time on main-land Antarctica or in the polynya and should not be merely sample collection activity.

6 (i) The proposals would be scrutinised through a multi-tier selection mechanism and only those recommended for final inclusion will be informed for fulfilling other requirements. No correspondence in regard to selection will be entertained.

(ii) "All approved proposals shall be implement able subject to guidelines/instructions/rules/regulations of Department of Ocean Development/NCAOR".

7 NCAOR/DOD makes arrangements for travel to Antarctica from Goa and back, accommodation in the ship and in Antarctica, food, special polar clothing requirements and personal insurance cover. All other expenses including those related to procurement of scientific equipments, attending pre-Antarctic trainings & briefings, Hard Duty Allowance etc. will have to be borne by the participating organisations. This may be taken into account while forwarding the nominations.

8 NCAOR/DOD is also looking for the promising candidates having sufficient Antarctic stay experience and the qualities of leadership, team building and human resource management to be considered as the LEADER of the ensuing 24th Indian Antarctic Expedition. Such candidates need to be nominated by their respective organisation. Details of bio data and professional experience of nominated candidate may kindly be sent to Director, NCAOR along with nomination.

9 Deadline for receiving proposals: **Three copies of the proposals are to be forwarded institutionally through proper channel** and must reach the Director, National Centre for Antarctic & Ocean Research, Headland Sada, Vasco da Gama, Goa 403804 **by 15th March 2004**. Nominations received after this date will not be entertained. Such information is also available on our **website www.ncaor.org**.

SD/-
(Dr. N. Khare)
Program Director (Science)
Ph: 0832-2520861
Fax: 0832-2520877,2520873
Email: khare45@hotmail

Advt No. NCAOR/01/2004
Date: 12.01.2004

PRESCRIBED FORMAT TO BE USED FOR SUBMISSION OF RESEARCH PROPOSAL TO PARTICIPATE IN INDIAN ANTARCTIC EXPEDITION

(All columns have to be filled compulsorily and should be Neatly typed)

1. Theme :
2. Field of Investigation :
3. Project Title :
4. Principal Investigator with full Address Office/Res. (Tel.No., Fax No., email) : :
5. Co-PI. With full address (Tel.No., Fax No., email, Mobile) :
6. Place of Work :
7. Project Summary :
8. Duration of Project :
9. Total Budget :

10. Source of funding
    Provided from P.I's Organization
    Sought from NCAOR/DOD :
11. Scientific aims & objectives
12. Region of investigation in Antarctica :
13. International Status :
14. National Status :
15. Importance of the proposed project :
16. Review of expertise available in the
    Proposed investigation :
17. Methodology :
18. Instruments/equipments to be Used :
    Self reliant
    Otherwise mention source
19. Logistics requirements to carry out :
    Proposed scientific activities :
20. Whether Helicopter support is needed
    If yes appox. No. of Flying Hours needed
21. Type of data to be generated
22. Key words of Meta data to be generated
23. If an ongoing programme, its accomplishments
    till date
24. Suggested plan of action for utilization of research
    outcome expected from the project :
25. Time schedule of activities (summer/winter)
    with milestones;
26. The team component (summer/winter)
    (Name and addresses of actual participants
27. Any national/international collaborations envisaged;
28. Any other information in support of participation.

Signature of the Principal Investigator

(Endorsement from the Head of the Institute/Organisation)

1. Certified that the Institute has no objection in the implementation of the above project with long term commitment and the participation of the above officials in Indian Antarctic Expedition.

2. Certified that the infrastructural and administrative facilities will be extended to PI through out the duration of above mentioned project.

3. Certified that Institute will take financial and management responsibilities of the project as per the existing rules of the Institute.

4. Certified that all other expenses including those related to procurement of scientific equipments, attending pre-Antarctic trainings medicals & briefings, Hard Duty Allowance etc. will have to be borne by the participating organisations.

5. Certified that an undertaking in prescribed format regarding data submission to NCAOR/DOD shall be provided.

Name and Signature of
Head of the Institute/Organisation
SEAL

(Please note in case there is no input use N.A or NIL as applicable)

BIO-DATA OF PRINCIPAL INVESTIGATOR
(Brief in 2-3 pages only)

1. Name & Address(Office/Res.) (in BLOCK LETTERS) :
2. Designation :
3. Date of Birth :
4. Name of Institution :
5. Academic qualification :
6. Details of research career :
7. Type of works engaged :
8. Details of research work carried-out and major achievements :
9. Publications :
10. Sponsored project completed/in progress :
11. Consultancy/Contract Research/Contract Training services rendered :
12. Memberships/Fellowships of Scientific/ Professional bodies/Societies/Academies :
13. Honours/Distinctions, if any, received in recognition of the research activity :
14. Involvement in the administrative/ organizational activities of the Institute :

Signature of the Principal Investigator

DECLARATION
(to be provided on official letterhead by the participating expedition member/s)

1) I/We, ... (Name of the expedition member/s) member/s of Summer/Winter team of 23rd Indian Antarctic Expedition do hereby Solemnly affirm that I/WE shall hand over all Data (Raw as well as Processed) generated during and after the Expedition in which I/We participated to NCAOR within the stipulated time as decided by NCAOR/DOD.

2) I/We also affirm that I/We shall provide a part of the Samples (with details & locations) as far as practicable collected by me/us during my/our stay in Antarctic Expedition to NCAOR on my/our return to be used as reference material at NCAOR.

3) I/We also affirm that I/We shall provide all possible details including methodology, equipments used etc in generating Data/Samples collection.

4) I/We shall acknowledge DOD/NCAOR in all publication arising out of Data generated during my/our Expedition.

5) I/We shall provide a copy of all publications on Antarctic Research immediately to NCAOR.

6) I/We shall abide by the guidelines/policies of DOD/NCAOR related to Indian Antarctic Expedition issued from time to time and provide all possible inputs to DOD/NCAOR as and when required related to Antarctic Expedition.

Signature of the Head of the Organization
with official Seal.
Dated:

Name & Signature of
Participating Expedition Member/s

K. K. Birla Foundation

Proposals/Applications are invited for
the Foundation's following Awards/Schemes

i) Saraswati Samman (Rs. 5 lakh) meant for an outstanding literary work in any Indian language
ii) Vyas Samman (Rs. 2.50 lakh) for an outstanding work in Hindi
iii) Bihari Puraskar (Rs. 1 lakh) meant for Hindi & Rajasthani writers of Rajasthan only
iv) Shankar Puraskar (Rs. 1.50 lakh) given for an outstanding work in Hindi on Indian philosophy, culture and art
v) Vachaspati Puraskar (Rs. 1 lakh) for any work written in Sanskrit
vi) G.D. Birla award for scientific research (Rs. 1.50 lakh)
vii) Fellowship in Comparative Indian Literature

Last date 31st March, 2004. Full details and Forms may be obtained from the Foundation's Office, Hindustan Times House, 10th Floor, 18-20, Kasturba Gandhi Marg, New Delhi-110001. Phone: 23317735, 23718282.

GURU JAMBHESHWAR UNIVERSITY, HISAR

Adv. No.1/2004

Applications are invited for the following posts on the prescribed form obtainable from the office of the Deputy Registrar (Faculty) on payment of Rs. 100/- (Rs.25/- for SC/ST & BC) in cash on counter or **Rs. 130/- (Rs.55/- for SC/ST & BC)** by registered post through **demand draft drawn in favour of the Registrar**, accompanied by self addressed envelope of 14 x 30 cms. The application form along with qualifications shall also be available on University website: www.gju.ernet.in

Pharmaceutical Sciences P-3, R-3, L-5 (3-Gen, 1-SC, 1-ESM) Computer Science & Engg (M.Tech/MCA) P - 2, R- 2, L - 2 (1-Gen, 1-SC) B.Tech (CSE & IT) P-3, R-6, L-12 (9 Gen, 2 SC,1 ESM), L (DE) -1, Business Management P -2, R-4, L -9-PG (4-Gen,3-SC, 1 BC, 1-ESM), L - 2-UG-Gen L (DE) -1, Printing Tech. P-2, R-4, L-5 (3 Gen, 2 SC), Electrical Engg L- 2 (Gen), Physiotherapy P - 1, R - 3, L - 5 (4 Gen, 1 SC), Demo - 2, Bio-medical Engg P-1, R-2, L -4 (3 Gen, 1 SC) Elect. & Comm. Engg. P-2 R-6, L-12 (9 Gen, 2 SC, 1 ESM) Mech. Engg P-2, R-4, L-9 (7 Gen, 2 SC).

Abbreviations stand for: P- Professor (16400-22400), R- Reader (12000-18300). L-Lecturer (8000-13500), Demo-Demonstrator (6500-10500) DE - Distance Education.

Application form along with requisite documents and a fee of **Rs. 200/-for Professor, Rs. 150/- for Reader and Rs. 100/-for Lecturer and others in the shape of demand draft** should reach the **Deputy Registrar (Faculty), Guru Jambheshwar University, Hisar - 125001 by 16.02.2004**. SC/ST & BC candidates are required to pay 1/4th of the prescribed fee. Candidates downloading the application forms from University website are required to also include the cost of application form in the application fee. Those already in employment should route their application through proper channel. The number of posts can vary. Reservation will be as per Haryana Government norms and will only be extended to the residents of Haryana state. The eligibility qualifications will be supplied with the application form. The applications not on the prescribed form, incomplete or those received after due date are liable to be rejected.

REGISTRAR

Yashwantrao Chavan Maharashtra Open University,

Dnyangangotri, Near Gangapur Dam, Nashik 422222.

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School of Computer Science
1. Reader - 01 Post (SC****)

School of Education
1. Reader - 02 Posts (01 Open, 01 SC*******)
2. Lecturer - 02 Posts (01 ST*****, 01 VJ*****(A))

School of Science & Technology
1. Reader- 01 Post (SC**)

School of Humanities & Social Sciences
1. Lecturer - 01 Post (Open) (Political Science)

Library And Resource Centre
1. Deputy Librarian - 01 Post (Open)
2. Assistant Librarian - 01 Post (SC**)

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1. Controller of Examination - 01 Post (Open)
(for a period of Five years)

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1) Controller of Examination Rs. 16400-22400
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Qualification, Experience, Desirable Qualification and other related information required for these posts are given in information brochure and are also available on our WEB SITE www.ycmou.com/jobs/notification.htm

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No.	Name of the Post	Post	Category	Upper Age Limit
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2.	Programmer Pay Scale - 8000-13500	1	Open	35 Years
3.	Cameraman Pay Scale- 5500-9000	1	OBC	30 Years

How to apply : Candidates should send Rs. 100/- (Rs. 50/- for Reserved Category) by **Demand Draft in favour of "Finance Officer, YCMOU, Nashik" payable at Nashik** for getting prescribed application form and details of the post **on or before 16.02.2004.**

Dr. N. R. Kapadnis
REGISTRAR

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WANTED

***Principal:** Qualifications will be as for the post of Lecturer with 10 years experience, including at least 5 years should be in a Secondary Teacher Education Institution

* **Lecturer:** M.Ed with minimum 55% marks.

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Apply immediately. All the qualifications will be required as per UGC, NCTE, State Govt. of Gujarat and SNDT Women's University norms.

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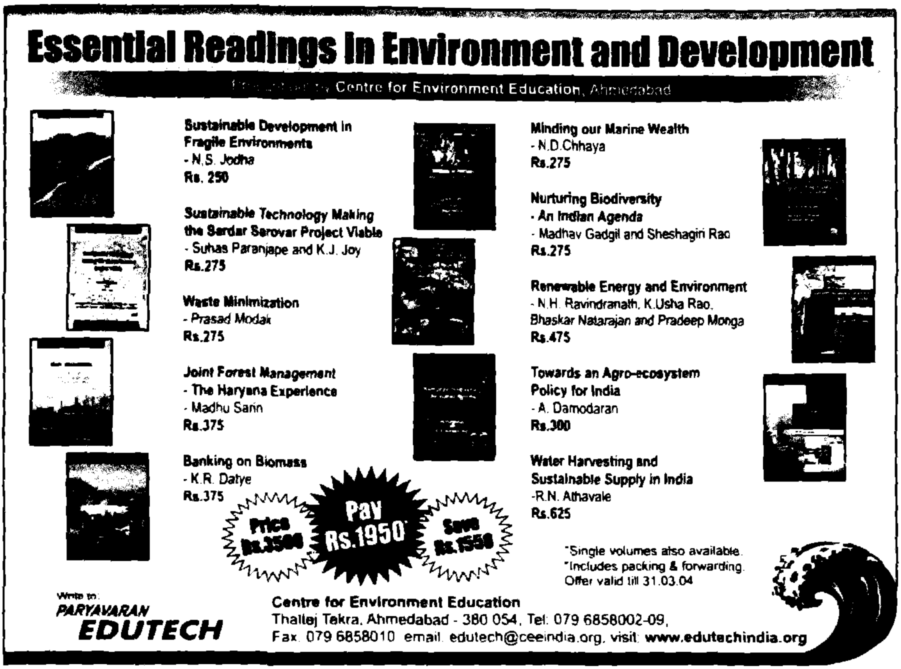
DIRECTOR



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CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY, HISAR

ADVERTISEMENT NO. 1/2004

Applications are invited for appointment to the post of Dean, College of Agricultural Engineering & Technology and Director, Extension Education in the pay-scale of Rs. 16400-22400 plus rent free unfurnished accomodation. The prescribed application form with qualifications and instructions/conditions may be obtained from the Assistant Registrar (General) at a cost of Rs. 50/- by cash at the counter or by sending self-addressed envelope (size 23X15 cm stamped Rs. 15/-) with crossed **IPO of Rs. 50/- in favour of Registrar, CCSHAU, Hisar payable at CCSHAU Post Office for each post separately**. The complete application form with crossed IPO of Rs. 200/- per application fee should reach the Registrar, CCSHAU, Hisar-125 004 by 28.2.04 (12.03.2004 for candidates residing abroad).

The post will be filled on tenure basis for a period of 4 years only. Those who have already served for one term of 3 to 5 years, as the case may be, in equal capacity, in any University/ICAR institution etc. will not be considered.

Dr M.S. Kuhad
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CLASSIFIED ADVERTISEMENT

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(Affiliated to Shivaji University Kolhapur)

ADVERTISEMENT

Applications are invited from eligible candidates for the following post.

Sr. No.	Designation	Total Post	Open Post
1	PRINCIPAL	1	1

Note :

1. For the post of Principal, Ph.D. or equivalent published work and a minimum experience of 10 years (for Principal of Reader's grade) or 15 years (for Principal of Professor's grade) of teaching /Research in Universities / College and other Institutions of Higher Education is essential.
2. Educational Qualifications, Pay scales and Service Conditions will be as per rules of Shivaji University, Kolhapur.
3. Those who are already in service should apply through proper channel.
4. Incomplete application will not be entertained.
5. Apply giving full particulars **within a month** from the date of publication of this advertisement to the undersigned.

Place : Solapur
Date : 22.1.2004

SECRETARY,
Shri Sangameshwar Education Society,
Sangameshwar College, Solapur

University of Kashmir
Srinagar - 6
NAAC Accredited Grade 'A'

Registrar, University of Kashmir invites applications on prescribed form for posts of **Professors, Readers** and **Lecturers** in different subjects, **Director** in Academic Staff College, ***Documentation Officer*** in CCAS. Applications should reach office of Registrar University of Kashmir latest by 16-2-2004. Detailed advertisement Notices/prescribed application form is available on our website: www.kashmiruniversity.net.

No. PR/KU/836
Dated. 20-1-2004

Sd/-
(Sy. Aabid Hussain Musawy)
Public Relations Officer

Gourishankar Education Society's
SATARA COLLEGE OF PHARMACY, SATARA
Plot No. - 1539, New Additional M.I.D.C., Degaon, Satara
(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts

Sr. No.	Designation	Total Posts	Open Post	Reserved Post
A	**Principal**	1	1	---
B	**Professor (Pharmaceutical Chemistry)**	1	1	—
C	**Assistant Professor**			
	1. Pharmaceutical Chemistry	2 FT	1	1(SC)(II)
	2. Pharmaceutics	1 FT	1	—
D	**Lecturer**			
	1 Pharmaceutical Chemistry	4 FT	2	1 SC(II), 1 ST(II)
	2. Pharmaceutics	3 FT	1	1 SC(II), 1 ST(I)
	3. Pharmacology	2 FT	1	1 SC (I)

Notes :

1) *Roman figures in the bracket shows the number of times the post has been advertised.*
2) SC/ST candidates who are domicile outside of Maharashtra State will be treated as Open Category candidates.
3) SC/ST candidates are advised to send a copy of their application to The Deputy Registrar, Special Cell, Shivaji University, Kolhapur - 416 004.
4) Reservation for female/persons with disabilities *will be decided by* appointing authorities.
5) Educational Qualifications, Pay Scales and Service Conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications will be supplied to the candidates on request.
6) Those who are already in service should apply through proper channel.
7) Incomplete application will not be entertained.
8) Apply giving full particulars **within a month** from the date of publication of this advertisement to the undersigned.

Place : Satara
Date : 27/01/2004

CHAIRMAN
Prof. M.S. Jagtap
Gourishankar Education Society,
Satara

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TAMILNADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY, CHENNAI - 51.

ADVERTISEMENT NO. 1/2004

Applications are invited in the prescribed form to fill up the following posts of Assistant Professor in the University.

otal No.of Vacancies : 48 (including 7 backlog vacancies)

il. lo.	Discipline/Department	No.of regular vacancies with reservation	No.of backlog vacancies with reservation
	VETERINARY AND ANIMAL SCIENCES FACULTY:		
	Veterinary Anatomy and Histology	1 GT	--
	Animal Genetics and Breeding	1 GT	1 SC
	Animal Nutrition	3 GT,SC,MBC/DC	--
	Veterinary Clinical Medicine, Ethics and Jurisprudence	2 GT,SC	–
	Dairy Science	1 GT	--
	Veterinary Animal Husbandry Extension	---	1 SC
	Livestock Production and Management	1 GT	1 SC
	Meat Science and Technology	1 GT	--
	Veterinary Parasitology	1 GT	1 SC
10.	Veterinary Pharmacology and Toxicology	1 GT	1 SC
11.	Veterinary Physiology and Biochemistry	4 GT,SC,MBC/DC,BC	--
12.	Veterinary Epidemiology and Preventive Medicine	1 GT	--
13.	Poultry Science	1 GT	1 SC
14.	Veterinary Surgery and Radiology	1 GT	--
15.	Animal Reproduction Gynaecology and Obstetrics	1 GT	--
16.	Directorate of Clinics (candidates with basic degree of B.V.Sc. with Masters degree in Clinical Subjects viz. Veterinary Clinical Medicine, Ethics and Jurisprudence, Veterinary Surgery and Radiology and Animal Reproduction Gynaecology and Obstetrics can apply)	4 GT,SC,MBC/DC,BC	--
17.	Directorate of Centre for AnimalProduction Studies (candidates with basic degree of B.V.Sc with Masters degree in the subjects of Animal Genetics and Breeding, Animal Nutrition, Dairy Science, Poultry Science, Meat Science and Technology, Livestock Production and Management and Animal Biotechnology /M.Sc Biotechnology can apply)	5 GT,SC,MBC/DC,BC,GT	--
18.	Directorate of Centre for Animal Health Studies (candidates with basic degree of B.V.Sc with Masters degree in the subjects of Veterinary Parasitology ,Veterinary Microbiology, Veterinary Pathology, Veterinary Epidemiology and Preventive Medicine and Animal Biotechnology / M.Sc Biotechnology can apply)	4 GT,SC,MBC/DC,BC	--
19.	Directorate of Extension Education (candidates possessing M.V.Sc degree in any of the subjects of Veterinary / Basic Sciences Faculties with basic degree of B.V.Sc except Animal Biotechnology/ M.Sc Biotechnology can apply)	4 GT,SC,MBC/DC,BC	--
II.	**BASIC SCIENCES FACULTY:**		
20.	Animal Husbandry Economics	1 GT	--
21.	Animal Husbandry Statistics and Computer Applications	1 GT	1 SC
III.	**FISHERIES SCIENCES FACULTY:**		
22.	Fisheries Biology	1 GT	--
23.	Fisheries Environment	1 GT	--

GT - General Turn, SC - Scheduled Castes, BC - Backward Classes, MBC/DC - Most Backward Classes and Denotified Communities.

SCALE OF PAY :

Assistant Professor : Rs. 8000-275-13500/-

QUALIFICATION :

A minimum qualification of Masters degree in the relevant subject with atleast 55% of marks or its equivalent grade and good academic records. Ph.D degree holders will be considered for grant of advance increment as per rules. A minimum OGPA of 3.50/4.00 or 8.00/10.00 or its equivalent is essential. PASSING OF NATIONAL ELIGIBILITY TEST (NET) IS MANDATORY.

For all the posts, basic degree of B.V.Sc. / B.F.Sc. recognised by this University is required.

Application form and instructions to candidates can be had from the Registrar, Tamilnadu Veterinary and Animal Sciences University, Madhavaram Milk Colony, Chennai - 51 by sending a crossed Demand Draft for Rs. 50/- drawn in favour of "The Finance Officer, Tamilnadu Veterinary and Animal Sciences University, Chennai-51" at any nationalised bank with self addressed envelope (31cm x 13cm) bearing postage stamp to the value of Rs. 15/-. The Demand Draft should be dated not earlier than 27.01.2004. Completed applications should reach the Registrar, Tamilnadu Veterinary and Animal Sciences University, Madhavaram Milk Colony, Chennai - 51 before 5.00 P.M. on 27.02.2004. The SC/ST candidates are exempted from payment of application fee on production of proper evidence. The candidates should specify in their application form " Application for the post of Assistant Professor"/ "Assistant Professor - Backlog vacancies".

The candidates those who are willing to serve the University for not less than a minimum period of three years need apply. The candidates selected for the posts of Assistant Professor by this University should execute a bond to serve the University for a minimum period of three years; failing which he / she should pay a sum of Rs. 30,000/- (Rupees thirty thousand only). The bond should be executed before joining duty. Cut off date for all qualifications is 31.01.2004. Proof (xerox copies) should be enclosed with the application.

Date : 25 - 01-2004
Place: Chennai - 51.

REGISTRAR i/c.

Posted at NDPSO on Tuesday/Wednesday every week

UNIVERSITY NEWS 42 (05) **February 02-08, 2004** **Regd. No. R.N. 7180/63** **Postal Regd. No. DL-11106/2003-05**

SUMMER PROGRAMMES 2004

For University /College Teachers, Principals, Vice-Principals, Heads of Departments/ Wardens/Administrators

Allahabad Agriculture Institute Deemed University (AAIDU) & All India Institute for Human Resource Development (AIIHRD) will be organizing the following Summer Programmes during the period March-May 2004. Applications are invited:

1. **Training Course in Educational Leadership Skills:** The programme is open to university administrators; college principals/ vice-principals and departmental heads who wish to learn innovative skills of administration, human and public relations, leadership strategies, institutional planning, staff motivation etc. The course contents will also include: legal aspects of education, financial management, fund-raising skills etc. **Dates: 8th to 14th May 2004 Venue: Bangalore**

2. **Professional Development Programme for Tertiary-level Teachers:** This course is open to university and college teachers in the areas of Arts, Science and Commerce. The programme will include topics such as teaching methodologies, evaluation and assessment, use of information technology in teaching, management skills, value-inculcation, communication skills, library usage etc. **Dates: 8th to 14th May 2004 Venue: Bangalore**

3. **Faculty Development Programmes for Teachers of Professional Colleges:** These programmes are open to the teachers of engineering and medical colleges, management and other technical institutions. The contents will include innovative teaching techniques, evaluation methodologies, communication skills, use of information technology in teaching, legal aspects of professional education and corporate ethics etc.

3 (a) 21st to 27th March 2004	**Venue: Kochi, Kerala**
3 (b) 18th to 24th April 2004	**Venue: Chennai, Tamil Nadu**
3 (c) 16th to 22nd May 2004	**Venue: Bangalore**

4. **Training Programme for Wardens/Assistant Wardens/Administrators' of Hostels:** This programme is open to Wardens/ Assistant Wardens/Administrators of the hostels in educational institutions. The course contents will include administration and management of the hostel, counselling techniques to deal with students on social problems like HIV/AIDS, drug-abuse, alcoholism, fund-raising skills, value-inculcation, adolescent psychology and healthcare etc.
Dates: 16th to 22nd May 2004 **Venue: Bangalore**

5. **National Conference on Distance Education:** The purpose of this conference is to bring together the managers and faculty of distance education programmes conducted by universities/deemed universities and their partners in distance education, so as to facilitate exchange and analysis of common concerns and search for solutions. Special attention will be devoted to quality assurance and improvement of distance education. This conference will have as resource persons experts in different aspects of distance education such as curriculum planning, evaluation and information and communication technology, besides representatives from various national/governmental educational organizations.
Dates: 24th to 30th May 2004 **Venue: Bangalore**

6. ***National Workshop on Assessment and Accreditation of Universities/Colleges:*** This programme has been planned for colleges/universities, which wish to undertake assessment and accreditation. The contents will include the preparation of self-study report, management of the assessment process and quality improvement etc. The experts in assessment and accreditation will facilitate this programme. The interested colleges/institutions can nominate one or two senior faculty members.
Dates: 24th to 30th May 2004 **Venue: Bangalore**

General Information:

- All the above-mentioned programmes will be held at a convenient college hostels.
- Each course will have only 35 participants who will be enrolled on first-come-first-served basis.
- The participants are expected to meet their travel costs themselves.
- The course fee will include boarding and lodging at the venue, course materials etc.
- For registration and further details, contact:

Executive Director
All India Institute for Human Resource Development (AIIHRD)
Ecumenical House, 39- Institutional Area
D-Block, Janakpuri, New Delhi-11058
Telephone: 011-25506190/25622752/25619570 Fax: 011-25555033 Email: aiache@nda.vsnl.net.in

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